Integrated Safety Management System

Verification Final Report

for

Allied Signal

Federal Manufacturing & Technologies

Kansas City, Missouri and New Mexico Facilities

September, 1999

Original Signed By
Dan Pellegrino, Team Leader

Signature Page

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EXECUTIVE SUMMARY

Department of Energy (DOE) Policy (P) 450.4, Safety Management System Policy, requires that an Integrated Safety Management System (ISMS) be institutionalized at each site in the DOE complex. The purpose of such a system is to ensure that work is conducted safely and in a manner that ensures adequate protection of the worker, the public, the environment, and the facility. DOE Acquisition Regulation (DEAR) 48 CFR 970.5204(e), requires that the Head of Contracting Activity review and approve the Contractor's ISMS description.

In July 1996, the DOE/Albuquerque Operations Office (AL) directed AlliedSignal Federal Manufacturing & Technologies (FM&T) to prepare an ISMS description and an ISMS implementation plan in compliance with the then draft DOE P 450.4, Safety Management System Policy. On November 22, 1996, the Manager, DOE/AL, approved AlliedSignal FM&T's Contract Number DE-AC04-76DP00613 Integrated Safety Management System FY97. Three elements of document were a description of their Environment, Safety, and Health (ES&H) Management Plan, their Specific Standards List, and their Site Specific Performance Measures. For FY98 and FY 99, AlliedSignal FM&T submitted revisions to the FY97 document. In the FY99 ISM Document, approved on January 6, 1999, a process termed "Confirmation Cycle" was discussed. The Confirmation Cycle is a process by which DOE will evaluate AlliedSignal FM&T's ISMS using Criteria Review and Approach Documents (CRADS).

On March 3, 1999, the Secretary issued his Safety Accountability Memo stating an expectation that all DOE sites be subject to an ISMS Verification by September 2000. To meet the Secretary's objective, the Confirmation Cycle approach was re-structured to meet the expectations of performing a Phase 1 & 2 ISMS Verification.

During July 12-16, 1999 and August 10-19, 1999, a multidiscipline team led by a DOE/AL certified ISM team leader, visited the Kansas City Plant and several FM&T sites in New Mexico. The review was conducted using a review plan with specific CRADS. Volume II, Appendix A of this report provides a crosswalk of the CRADS to the Phase 1 & 2 Core Expectations identified in the ISMS Verification Team Leaders Handbook.

CONCLUSIONS

AlliedSignal FM&T

Phase 1 & 2 ISMS Verification review at AlliedSignal FM&T indicates that FM&T management has made significant progress toward achieving the DOE objective to "*…systematically integrate safety into management and work practices at all levels …. Through effective integration of safety management into all faces of work planning and execution…*"

- With a few exceptions, the AlliedSignal FM&T ISMS is consistent with the ISM Principles/Functions and the DEAR.
- AlliedSignal FM&T have made significant progress of achieving a standards-based approach to safety management.
- Command Media provides an excellent tool for all employees to access FM&T's Operating Requirements.
- Based on document reviews, personnel interviewed, and work observed implementation of ISM at the FM&T facilities is being achieved.

Kansas City Area Office

The verification included a review of the Kansas City Area Office (KCAO). The review focused on the KCAO interface with FM&T with respect to day-to-day oversight, business oversight, and mission oversight. This review was primarily a Phase 1 type review. Actual observance of KCAO work was not performed.

NOTEWORTHY PRACTICES

The following mechanisms or practices are considered "Noteworthy" because they demonstrate innovative system integration and/or promulgation of ISM.

- The fully automated Business Model is considered a noteworthy practice in that it facilitates obtaining information relative to procedures and practices within the contractor's organization.
- A user-friendly tracking system is employed by FM&T that provides full and complete records relative to the qualifications and training of associates.
- Command Media is an excellent configuration management system and promotes an easy-to-understand perspective of how FM&T practices fit together to form their ISM system.
- The feedback provided by the FM&T ES&H organization to the originator of a work activity with regards to the PHA progress is noteworthy.

OPPORTUNITIES FOR IMPROVEMENT

An evaluation of individual issues identified in the completed CRAD forms (see Volume II, Appendix C) identified the following opportunities for improvement.

OFI-1	Maintenance of ISMS Description FM&T should document the process used to maintain their ISMS description.
OFI-2	Level Hazard Identification and Control FM&T should continue to develop the Job Hazard Analysis program to ensure activity level hazards are identified and associated controls are appropriately established.
OFI-3	Hazardous Material Inventory FM&T/NM should establish a hazardous material inventory system for facilities.

RECOMMENDATIONS

1. AlliedSignal FM&T address OFI-1, Maintenance of ISMS description and incorporate results in the FY 2000 ISM submittal. DOE/OSS and DOE/KCAO should concur in the maintenance approach proposed by FM&T to ensure appropriate DOE involvement.
2. AlliedSignal FM&T address OFI-2 and OFI-3 prior to September 2000.
3. KCAO should concur in the extent and validate the adequacy of AlliedSignal FM&T actions to address OFI-2, OFI-3 and the remaining issues identified in the ISMS verification assessment forms.
4. Upon completion of Recommendations 1-3, and any other outstanding ISM related actions, a declaration of ISM implementation be prepared by FM&T for KCAO and AL concurrence by September 2000.

1.0 SITE INTRODUCTION

AlliedSignal Federal Manufacturing & Technologies (FM&T) is a prime contractor for the U.S. Department of Energy. The company, with sites located in Kansas City, MO, Albuquerque and Los Alamos, NM, produces non-nuclear components for weapon systems. The Kansas City facility operates under three major business units, the Electronic Products Business Unit, the Mechanical Products Business Unit, and Engineered Materials and Technical Services. The Kansas City facility was established in 1949 and comprises the largest portion of the Bannister Federal Complex in south Kansas City, MO. The New Mexico operations include the NC-135 compound, Mobile Electronics Maintenance Facility (MEMF), Relay Site, and Coyote Canyon Facility, Craddock, Air Park, and the Los Alamos Facility.

AlliedSignal employs about 3,000 associates in Kansas City and 295 in New Mexico. The president of the Kansas City Plant, heads the AlliedSignal management team for the operation.

In 1995, AlliedSignal earned ISO 9001 certification at its Kansas City facility. The plant was also conditionally recommended to become a DOE Voluntary Protection Program (VPP) Star site in 1995. In April 1996, FM&T Kansas City received STAR status. This STAR status validates conformance to the major tenets of VPP: management leadership; associate involvement; work site analysis; hazard prevention and control; and, safety and health training.

The Site Safety Assessment for the Kansas City Plant, approved by DOE in September 1995, classifies the KCP as a low hazard, non-nuclear facility.

The hazardous materials that are used or stored at FM&T are in accordance with OSHA and EPA regulations or under the control of DOE programs. Three categories of hazardous materials found at FM&T are:

1. Energetic Material. Storage, handling, testing, use and shipping is limited to Hazard Class 1, Division 3 (1.3) or (1.4).
2. Radiological material. The FM&T inventory is not to exceed threshold quantities of radionuclides for higher hazard class categories 2 and 3 (Ref Table A.1 of DOE-STD-1027-92).
3. Hazardous Chemicals. Thresholds are OSHA's Process Safety Management (OSHA 1910.119); EPA Risk Management Rule (40 CFR68) Regulated HAPs and Accidental Release Chemicals; and the Threshold Planning Quantities listed in 40CFR355.

2.0 BACKGROUND

On November 23, 1998, under Contract Number DE-AC04-76DP00613, the ISMS FY 99 document was submitted to the AL manager for approval of Allied's ISMS FY ES&H Management Plan (Plan).

The Plan is submitted annually by FM&T to the DOE for Contracting Officer approval. The Plan incorporates DOE P 450.4, Safety Management System Policy requirements. Appendix B of the Plan entitled Safety Management System Correlation Matrix provides a crosswalk of the Safety Management System Components and the FM&T implementation of those components.

The ISMS FY99 document also contains three other major elements. They are the Operating

Requirements, the FY99 Criteria Review & Approach Documents (CRADS), and the FY99 Confirmation Cycle. The Operating Requirements describe the ES&H standards applicable to FM&T operations. The FY99 CRADS and FY99 Confirmation Cycle describe the methodology proposed to validate ISM implementation and validate operations in ES&H functional areas (e.g., DOE 450.5).

On January 6, 1999, the AL Manager, as the Head Contracting Authority, approved the FY99 ES&H Management Plan submittal included in the Contract Number DE-AC04-76DP00613 Integrated Safety Management FY99 document. This Plan "establishes commitments to FM&T to integrate environment, safety and health requirements into all phases of its activities and to conduct its operations in an environmentally clean manner, protective of its workers, subcontractors, visitors, and the surrounding community, while fulfilling its mission to the DOE."

3.0 PURPOSE

A Phase 1&2 ISMS Verification was conducted to verify that FM&T ISMS FY99 document fulfills the expectations of the AL Manager, meets the requirements of the DEAR and the DOE Policy for Safety Management Systems, and that the management system delineated in FM&T's ISMS FY99 document is implemented.

4.0 SCOPE

The scope of the AlliedSignal FM&T ISMS Verification encompasses all mission and support work at the Kansas City Plant and at selected FM&T New Mexico facilities.

The scope of the Kansas City Plant review included ISM system definition (Phase 1) and system implementation (Phase 2). A broad range of operations was reviewed including: mechanical, electrical, chemical, platting, maintenance, and machining.

The scope of the FM&T New Mexico Facilities review included ISM system definition (Phase 1) and system implementation (Phase 2) at the Craddock facility, the Mobile Electronic Maintenance Facility, and NC-135 operations. The Los Alamos Office facility, Coyote Canyon facility, and Relay Site facility were not reviewed.

5.0 PREREQUITES

The Authorizing Authority specified no prerequisites.

6.0 ISMS VERIFICATION RESULTS

During this verification, the definition and implementation of the processes designed to address the five core functions and the seven guiding principles of ISM were assessed. Document reviews, personnel interviews, and observations of work activities were conducted.

Appropriate systems at the institutional level were found to exist for all five core functions: Define the work: Analysis Hazards; Implement Controls; Perform Work; and Feedback & Improvement. An issue was noted with respect to the DEAR Clause requirement concerning system description maintenance. For the past three years, FM&T has submitted annual updates to their ISMS document ES&H Management Plan. Although FM&T is meeting the requirement to provide DOE with an annual update of their system

description, the process that FM&T uses to ensure that the ISMS document is kept current is not defined. A robust ISMS Description maintenance process would define thresholds that would prompt a revision to the ISMS document, ensure appropriate DOE involvement for revisions, and define change control elements for the ISMS document.

At the facility level, FM&T Kansas City has established systems addressing all five ISM functions. For FM&T New Mexico an issue was noted regarding hazardous material inventory. Presently, FM&T/NM relies on an ad-hoc administrative process to inventory hazardous materials. FM&T New Mexico have a computerized procurement system for hazardous materials, and a system to review shelf life of materials that requires physical inspections, but the two are not linked to monitor inventory. Although FM&T does not routinely use large amounts of hazardous materials, the possibility exists that, over time, some quantities may exceed established thresholds.

With one exception, ISMS at the activity level were found to be in place. For the core function of Hazard Analysis and Implement Controls, it was noted that FM&T have not yet implemented their JHA program. At the Kansas City Plant, FM&T recognized the need to strengthen the JHA program. Currently, JHAs for some FM&T Kansas City activities need to be revised and/or developed. Additionally, FM&T determined a need to hyper-link the JHAs to work instructions using Command Media. The FM&T New Mexico operations also recognized a weakness in their process for determining activity level hazards and have begun to implement a JHA program.

An evaluation of individual issues identified in the completed CRAD forms (see Volume II, Appendix B) identified the following opportunities for improvement.

Opportunities for Improvement

OFI-1	Maintenance of ISMS Description FM&T should document the process used to maintain their ISMS Description. A description of the process should be included in the next submittal of the ISM Document, and address the following: 1) DOE involvement; 2) Change Control for day-to-day and annual updates; 3) Roles and Responsibilities; and 4) Thresholds that would prompt a change to the ISM Document.
OFI-2	Level Hazard Identification and Control FM&T should continue to develop the JHA program to ensure activity level hazards are identified and associated controls appropriately established.
OFI-3	Hazardous Material Inventory FM&T New Mexico should establish a hazardous material inventory system for facilities.

Noteworthy Practices

The following mechanisms or practices are considered "Noteworthy" because they demonstrate innovative system integration and/or promulgation of ISM.

- The fully automated Business Model is considered a noteworthy practice in that it facilitates obtaining information relative to procedures and practices within the contractor's organization.
- A user-friendly tracking system is employed by FM&T that provides full and complete records relative to the qualifications and training of associates.
- Command Media is an excellent configuration management system and promotes an easy-to-

understand perspective of how FM&T practices fit together to form their ISM system
- The feedback provided by the FM&T ES&H organization to the originator of a work activity with regards to the PHA progress is noteworthy

7.0 CONCLUSIONS

This Phase 1 & 2 ISMS Verification review at AlliedSignal FM&T indicates that FM&T management has made significant progress toward achieving the DOE objective to "*…systematically integrate safety into management and work practices at all levels …. Through effective integration of safety management into all faces of work planning and execution…"*

- With a few exceptions, the AlliedSignal FM&T ISMS is consistent with the ISM Principles/Functions and the DEAR.
- AlliedSignal FM&T have made significant progress of achieving a standards-based approach to safety management.
- Command Media provides an excellent tool for all employees to access FM&T's Operating Requirements.
- Based on document reviews, personnel interviewed, and work observed, implementation of ISM at the FM&T facilities is being achieved.

8.0 LESSONS LEARNED

A review of the approach taken for this verification was conducted to determine lessons learned. The following lessons learned were identified:

- For future confirmation of ISM effectiveness at FM&T, an effective mechanism would be to focus on the process used by FM&T to ensure their ISMS is kept current. The content of the review would include appropriate DOE involvement when changes are made to the FM&T ISMS (and Description).
- For verifications conducted at sites with different geographical locations like FM&T, it is better to start the verification at the parent location.
- The number of team members (7) for this verification was appropriate.

VOLUME II-Appendices and Supporting Information

Appendix A - How Phase I & II Core Expectations Were Assessed

	Phase I Core Expectations **ISMS Verification Team Leader's Handbook**	Criteria Review Approach Document (CRAD) Reference
CE-I-1	The ISMS documentation is consistent with DOE P.450.4, the DEAR, and HCA guidance.	DEAR-1
CE-I-2	DOE and contractor effectively translate mission into work, set expectations, provide for integration, and prioritize and allocate resources.	PM-1 ; PM-2; NMPM-2
CE-I-3	An ISMS should include methods for identifying, analyzing, and categorizing hazards.	HAZ-4; NMPM-2
CE-I-4	The ISMS should include methods for establishing and maintaining an agreed-upon set of safety standards before work is performed.	HAZ-4; NMPM-1
CE-I-5	Contractor policies, procedures, and documents are established and are adequate for the work or process to be performed safely.	MG-4; NMPM-1
CE-I-6	The ISMS should be continuously improved through assessment and feedback.	MG-5; NMPM-2
CE-I-7	The ISMS should establish that at every level of control, line management must be responsible for safety. Roles and responsibilities defined and maintained within the organization.	MG-1 ; OI-1; NMPM-1
CE-I-8	The ISMS should ensure that personnel are competent commensurate with responsibility for safety.	PM-3 ; HAZ-6; NMPM-1
CE-I-9	The DOE should have a set of processes that interface efficiently and effectively with the contractor organization	DOE-1

	Phase II Core Expectations **ISMS Verification Team Leader's Handbook**	Criteria Review Approach Document (CRAD) Reference
CE-II-1	An integrated process has been established and utilized to identify and prioritize specific mission discrete tasks, mission process operations, modifications and work items.	PM-1 ; PM-2; NMPM-2
CE-II-2	Hazards associated with the Scope of Work are identified, analyzed, and categorized.	HAZ-4; NMPM-2
CE-II-3	An integrated process has been established and is utilized to develop controls that mitigate the identified hazards present within a facility or activity.	HAZ-4; NMPM-1
CE-II-4	An integrated process has been established and is utilized to effectively plan, authorize and execute the identified work for the facility or activity.	OI-1; NMPM-2
CE-II-5	A process has been established and is utilized which ensures that mechanisms are in place to ensure continuous improvement	MG-5; NMPM-2
CE-II-6	Clear and unambiguous roles and responsibilities	MG-1 ; MG-4; NMPM-1
CE-II-7	Procedures and mechanisms ensure work is formally and appropriately authorized and performed safely. DOE managers involved in the review of safety issues and have active role in authorizing and approving work/operations.	OI-2; NMPM-1
CE-II-8	Procedure and mechanisms ensure hazards are analyzed, controls developed, and feedback /improvement programs are in place.	MG-5 ; HAZ-4; NMPM-2

APPENDIX B - Completed Assessment Forms

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Program Management	**PM-1**

Objective

Contractor procedures and practices ensure that missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated.

Acceptance Criteria

1. Contractor procedures and practices translate mission expectations received from DOE into tasks that permit identification of resource requirements, relative prioritization, and performance measures.

2. Contractor procedures and practices provide for DOE approval of the contractor's proposed tasks and prioritization of the mission expectations transmitted to the contractor.

3. Contractor procedures and practices provide for change control of the approved task identification, prioritization, and funding.

4. Contractor procedures and practices provide for flowdown of DEAR 970.5204-2, "Integration of Environment, Safety and Health into Work Planning and Execution," requirements into subcontracts involving complex or hazardous work.

Review Approach

Record Review:

Reviewed the contractor's procedures for identification of mission requirements and balancing of Resource allocations. Reviewed the contractor's change control procedures. Reviewed the contractor's procedures requiring safety requirement flowdown into subcontracts and the Business Model.

The following documents were generally reviewed:

Contract No. DE-AC04-76DP00613 dated 4/1/95
Business Model dated 9/14/98
ES&H Management Plan (applicable portions) dated 10/23/98
Letter from Twinning to Clegg, Subject: Contract Number DE-AC04-76DP00613 Integrated Safety Management FY99 dated 1/6/99
DOE Strategic Plan dated September 1997
Operating requirements Database printed 7/14/99

The following International Organization (ISO) for Standardization/Voluntary Protection Program (VPP) and Process Description (PD) documents were generally reviewed:

ISO #	**Title**
4.3.2	Legal and Other Requirements printed 7/13/99
4.3.3	Objectives and Targets printed 7/13/99
4.4.1	Structure and Responsibility printed 7/13/99

VPP #	**Title**
1.a	Commitment to Safety and Health Protection printed 7/13/99

PD #	**Title**
01.01.04.02	Environmental Safety & Health Process dated August 10, 1998
01.03.05.01.	Operating Budget Formulation dated August 10, 1998
01.06.07.00	External Requirements Management dated August 10, 1998
01.06.12.00	Resource Management dated August 10, 1998
22.02.01.01	Annual ES&H Inspection dated 5/4/98

Interviews:

Interviewed contractor personnel responsible for management of the Contract, ES&H Management Plan, and the Business Model process. Specifically, personnel from Resource Management, External Requirements, ES&H Management, legal, and the Controller Office were interviewed to obtain confirmatory information relative to this objective.

1. Engineering Project Manager
2. Manager, ES&H Operations
3. Controller
4. Manager, Resources Planning
5. Engineer Safety Staff
6. Manager, Program Manager
7. Staff Environmental Project Specialist
8. Technical Projects Specialist

Observations:

1. Command Media Demonstration
2. Change Order Control System Demonstration
3. Trending of Injury/Illness Data
4. Corrective Action Tracking System Demonstration

Discussion of Results

Contractor personnel demonstrated an excellent knowledge of the contract requirements and the integration of the operating requirements with the core values of Integrated Safety Management (ISM). Personnel interviewed appeared to recognize the importance of ensuring that the commitments contained in the ES&H Management Plan are effectively integrated into the Plant's operations. The ES&H Management Plan is consistent with the AL Strategic Plan. Adherence to the VPP tenants and implementation of ISO 14001 enhance the site's meeting the ISM principles and core functions.

Contractor Resource Management personnel are responsible for ensuring that the provisions contained in PD #01.06.12.00 are being satisfied. Two Work Instructions (WIs), designed to receive notification of

priority conflicts and subsequent resolution to the customer, support the PD. Specifically, requirements include planning and oversight to assure that customer requirements are met. As related to work priorities, the majority of the decisions/issues are resolved in-house. As they may impact external customers, the resolution is conducted through direct involvement of the parties that may have direct information that would be of assistance in achieving resolution.

Discussions with personnel from the FM&T legal and contracts reflected a thorough knowledge relative to the procedures and practices that translate mission expectations that are received from the DOE.PD #01.0.05.01delineates the various stages of the Operating Budget formulation. The effort begins with the receipt of the budget call from the DOE, a budget call from plant organizations, a review of the data for compliance, preparation of summary reports, and establishing funding programs consistent with the DOE Strategic Plan. Additional supporting documentation is contained in WIs 01.03.05.01.01 and 01.03.05.01.02.

Contractor procedures and practices provide for a flowdown of safety requirements to its subcontractors. There are two types of subcontracting that are predominant at this site (Service and Construction). ES&H requirements flowdown through the respective contract. Recognizing that construction type activities present the greatest hazard, various organizations (Purchasing, ES&H, Facilities Management Services) have established a process by which prospective bidders are pre-qualified. This practice has paid high dividends as reflected by the injury/illness data accumulated to date for CY1999.

Engineering Project Management has their change order control system fully computerized and is readily accessible and traceable. The system provides a variety of information that reflect coordination efforts, rational for the specific change, effective change dates, approvals, and other pertinent information. This system is cost effective when considering that approximately 300 change controls are processed on a monthly basis. The process is reviewed on an annual basis.

The Contractor has established a fully computerized system entitled Command Media that reflects their "Business Model". The system was activated last year on the Internet and is accessible plant-wide. The following are the main components of the model.

01 Manage the Enterprise
02 Order, Administration and Design
03 Plan, Procure, and Produce
04 Support the Enterprise.

This system provides easy access to all of the PDs and the WIs. Both number and title identify each of the PDs and WIs. Each is further identified by its effective date and Process Leads. The Business Model is updated as necessary by each of the Process Leads and has the capability of being updated on a weekly basis.

Noteworthy Practice PM-1: The fully automated Business Model is considered a noteworthy practice in that it facilitates obtaining information relative to procedures and practices within the contractor's organization. In assigning accountability and responsibility to a Process Lead, personnel recognize their value to the organization and are able to focus on specific processes. The document allows for a greater interaction relative to various business units or divisions.

Issue:

None

Conclusion

The Contractor is meeting the Acceptance Criteria for this Program Management Objective (PM-1).

Submitted: *Original Signed By* Alex R. Griego	Approved; *Original Signed By* ISMS Verification Team Leader
	Date:

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Program Management	**PM-2**

Objective

Contractor ISMS procedures and practices for Program Management ensure balanced priorities. Resources are allocated to address safety, programmatic, and operational considerations. Protecting the public, workers, and environment is a priority whenever activities are planned and performed.

Acceptance Criteria

1. The prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results.

2. Priorities include commitments and agreements to DOE as well as stakeholders.

3. Contractor ISM procedures and practices provide adequate resources to adequately analyze hazards associated with the work being planned.

4. Contractor ISM procedures and practices for resource allocations include provisions for implementation of hazard controls for tasks being funded.

5. Resource allocations reflect the tailored hazard controls.

Review Approach

Record Review:

Reviewed contractor procedures for identification of mission requirements and balancing of resource allocations. Reviewed the contractor's risk management maintenance and pre-planning process.

The following general documents were reviewed:

Budget Prioritization
Work Authorization Directives
Operating Requirements Database

The following International Standards Organization (ISO)/Voluntary Protection Program (VPP)/Process Description (PDs) were reviewed:

ISO #	**Title**
4.2.0	Environmental Policy printed 7/13/99
4.3.2	Legal and Other Requirements printed 7/13/99
4.3.4	Environmental Management Programs printed 7/13/99
4.4.1	Structure and Responsibility printed 7/13/99
4.5.1	Monitoring and Measurement printed 7/13/99

VPP #	Title
1.a	Commitment to Safety and Health Protection printed 7/13/99
1.b	Written Safety and Health Program printed 7/13/99

PD #	Title
01.06.07.00	External Requirements Management dated 8/10/98
01.06.12.00	Resource Management dated 8/10/98
22.01.01.01	Risk Management Pre-planning Process dated 2/2/98
22.02.02.07	Risk Management Maintenance Process dated 12/9/96
22.02.02.10	Environmental Compliance dated 6/22/98

Interviews:

1. Manager, ES&H Operations
2. Controller
3. Manager, Resources Planning
4. Engineering Project Manager
5. Technical Project Specialist

Observations:

None

Discussion of Results

Consistent with PD #01.06.07.00, the process for the processing of external requirement involves various FM&T organizations. Once the responsible organization is identified and the work is assigned, the task is reviewed and the subject matter expert initiates the work in conjunction with other process owners. Work is then costed and the implementation phase begins. During this period, there may be significant interactions with the customer. Resource management personnel provide the planning and oversight to assure the customer requirements are satisfied. Program management personnel establish and communicate priority/resource planning to monitor costing such as overtime.

FM&T maintains a risk management program that identifies and assesses ES&H risks associated with planned activities. The objective of this program is to reduce/minimize risk to employees, the public and/or the environment. The various stages of the risk management preplanning process is documented in PD #22.01.01.01 which establishes the stages necessary for the control of the hazards associated with planned activities.

Interviews with FM&T personnel verified that a management system is in place that ensures that the Contractor ISMS procedures and practices for Program Management provide balanced priorities. Resources are allocated to address safety, programmatic, and operational considerations. Protecting the public, workers, and environment is a priority whenever activities are planned and performed. Budget personnel interact with appropriate operations personnel to ensure that safety concerns are a viable component of the budget process.

Noteworthy Practice:

None

Issue:

None

Conclusion

The Contractor is meeting the Acceptance Criteria for this Program Management Objective (PM-2).

Submitted: *Original Signed By* Alex R. Griego	Approved *Original Signed By* ISMS Verification Team Leader
	Date:

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Program Management	**PM-3**

Objective

The contractor procedures and practices ensure that personnel who define the scope of work and allocate resources have competence that is commensurate with the assigned responsibilities.

Acceptance Criteria

1. Contractor ISM procedures and practices ensure that the personnel, including line management, who define, prioritize, and approve the scope of work and allocate resources have competence that is commensurate with the assigned responsibilities.

2. Personnel who actually participate in definition of the scope of work and allocate resources demonstrate competence to prioritize and approve work with tailored hazard controls.

Review Approach

Record Review:

Reviewed contractor organizational documentation to determine the personnel positions with responsibility associated with this objective. Reviewed a random sampling of position descriptions. Reviewed Training and Qualification Database and Job Classification Description material, which supports gaining or verifying competence to fill the positions.

The following International Organization for Standardization (ISO)/Voluntary Protection Program (VPP)/Process Description (PDs) were reviewed:

ISO #	**Title**
4.4.2	Training, Awareness and Competence printed 7/12/99

VPP #	**Title**
1.b	Written Safety and Health Program printed 7/12/99
4.a	Competent Professionals printed 7/12/99
5	Safety and Health Training printed 7/12/99

PD #	**Title**
01.01.03.01	Qualification/Training dated April 26, 1999
01.01.03.02	Mandated Training dated April 26, 1999
01.01.03.03	Development Training dated April 26, 1999

Interviews:

Individuals and managers interviewed to establish if contractor was meeting the acceptance criteria for this objective included:

1. Manager, Human Resources
2. Manager, ES&H Operations

Observations:

1. Computerized Training Tracking System Demonstration

Discussion of Results

The Manager of Human Resources is responsible for the three PDs noted above. Due to a scheduled reorganization some of these duties/responsibilities may soon be altered/modified; however, the reorganization should not reduce the contractor's capability for ensuring that the competence level of personnel is maintained. The primary training focus is to ensure personnel working on specific job functions and/or tasks are fully qualified and meet the legal and regulatory requirements (environmental, safety and health, etc.). Mandatory training is the second in priority to ensuring that FM&T associates meet legal and regulatory requirements not specifically required by job function or task, but include DOE and other management directed training. These first two are fully funded. A third category (developmental training) is considered important for the development of associates and has generally been supported at an 80% level. The PDs delineate the action items necessary for implementation of the system. There is a reliance on the individual Division Directors (or heads of organizations) and their assigned/designated training representatives to ensure that the appropriate training is scheduled for associates under their direct control. Routine training, security, EEO, etc., also become part of the employees training records; however, a system employing badge swipes assures inclusion into the associates records. One item that is of importance to contractor management is the aging workforce and the lack of an apprentice program to ensure adequate replacement for departing personnel. Various DOE contractors are reviewing cost effective options and have recognized this to be a potential problem for many DOE sites. This is a skills mix issue that will ultimately require some commitment by the DOE to effect resolution. For salaried associates, there is a yearly Performance Review that occurs with their direct supervisor. The purpose of this review is to establish if the associate is fulfilling his/her training requirements and to establish long term goals that may be accommodated through additional training.

Discussions with the Manager, ES&H Operations, provided verification that all of his direct reports are in compliance with the training requirements to ensure qualification and that the legal requirements are being met (Federal/State ES&H). A sampling of his records were given a cursory review to establish level of compliance. There is a concerted effort on his part to offer associates an opportunity to enhance their intellectual capacity and skill mixes as such training aligns with business needs. There was ample evidence to reflect coordination with his Designated Training Representative to complete the annual reviews and identify (in conjunction with the individual associate) any qualification and/or mandated training requirements.

Noteworthy Practice PM-3: A user-friendly tracking system is employed by FM&T and provides full and complete records relative to the qualifications and training of associates. This system facilitates supervisory overview of associates needs and the system may be used to forecast budgetary expenditures.

Issue:

None

Conclusion:

The Contractor is meeting the Acceptance Criteria for this Program Management Objective (PM-3).

Submitted: *Original Signed By* Alex R. Griego	Approved: *Original Signed By* ISMS Verification Team Leader
	Date:

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Hazard Identification	**HAZ-1**

Objective

Contractor procedures and practices ensure that before operations are commenced or work is performed, (a) hazard controls are identified, tailored, agreed upon, and implemented, and (b) safety standards and requirements are identified, agreed upon, and implemented, such that there is adequate assurance that the public, workers, and environment are protected from adverse impacts from the hazards.

Acceptance Criteria

1. Contractor ISM procedures and practices utilize acceptable standards and methodologies to identify adequate hazard controls that protect the public, worker and environment.

2. Contractor ISM procedures and practices ensure controls are tailored to the hazards associated with the work or operations to be authorized.

3. Contractor ISM procedures and practices ensure the identified controls, standards, and requirements are agreed upon and implemented prior to the commencement of the operations or work being authorized.

4. Contractor ISM procedures specify an appropriate review and approval process for the hazard controls and safety standards and requirements and are effectively utilized.

5. Contractor ISM procedures specify the conditions and requirements to be satisfied for operations to be initiated and conducted and are effectively utilized.

Review Approach

Record Review:

Integrated Safety Management System FY99
Site Safety Assessment for the Kansas City Plant, September 1995
U. S. Department of Energy Contract DE-AC04-76-DP00613
Personnel Training Jackets

The following International Standards Organization (ISO)/Voluntary Protection Program (VPP)/Process Descriptions (PDs) were reviewed:

ISO #	**Title**
4.3.4	Environmental Management Programs printed 7/12/99
4.4.2	Training, Awareness and Competence printed 7/12/99
4.4.6	Operational Control printed 7/12/99
4.4.7	Emergency Preparedness and Response printed 7/12/99

VPP #	Title
1.b	Written Safety and Health Program printed 7/12/99
4.b	Controlling Hazards printed 7/12/99
4.c	Administrative Controls printed 7/12/99
4.e	Preventive/Predictive Maintenance printed 7/12/99

PD #	Title
01.06.10.00	Emergency Management Process dated 1/18/99
21.01.04.02	Chemical Hazard Evaluation dated 6/1/98
22.01.01.01	Risk Management Pre-planning Process dated 2/2/98
22.02.02.02	Fire Protection Program Requirements Identification dated 6/22/98
23.01.01.01	Environmental Restoration dated 5/4/98
23.02.01.02	Pollution Prevention dated 5/3/99
23.02.02.01	Clean Air Act & Local Air Regulation Compliance dated 1/9/98
23.02.03.01	Wastewater Discharge dated 11/10/97
23.02.04.01	Waste Management dated 5/11/98
23.02.05.01	Pesticides and Toxic Substances Control dated 12/15/97

Interviews:

1. Manager, ES&H – Environmental Compliance
2. Manager, Safety and Health
3. Manager, ES&H – Waste Management
4. Staff Engineer, Environmental Operations, Site Pollution Prevention Coordinator
5. Staff Environmental Protection Specialist – Environmental Restoration
6. Staff Environmental Protection Specialist – Clean Air
7. Staff Industrial Hygienist
8. Environmental Protection Specialist, Senior
9. Divisions A, M, and E Designated Training Representative

Observations:

1. Observed the process for the completion of a Preliminary Hazards Assessment (PHA) Checklist. This PHA Checklist included the entire package for this project. It described the project, the hazard analysis, and then the requirements from the ES&H review and comments. This example adequately demonstrated that the PHA process is the cornerstone of the ISMS process at AlliedSignal Federal Manufacturing & Technologies (FM&T).

2. A demonstration of the FM&T Qualification & Training System (QTS) was also observed. This system gives the qualifications necessary for any given position within FM&T as well as the qualification plan, should that person not meet all the qualifications. This system is accessible by any manager. Thus, it is an added layer to ensure the safety of the associates.

Discussion of Results

The DOE VPP, the ISO 14001 Environmental Management Standard, the Environmental, Safety, and Health (ES&H) Management Plan, and the FM&T Quality Manual satisfy the components of Department of Energy Policy (DOE P 450.4), "Safety Management System Policy," the Department of Energy Acquisition Regulation (DEAR) Requirements for Integrated Safety Management, and the Contracting Officers' direction to FM&T. This is clearly stated in the FM&T ES&H Management Plan. The contractor utilizes acceptable standards and methodologies to identify adequate hazard controls that protect the public, worker and environment.

The cornerstone of the contractor's ISM process is the PHA. The PHA analyzes the hazards of the task, sets the controls for the task, and identifies the required training for the task. This is all accomplished and tailored to the scope of the task. Once the PHA process is initiated, it goes through a thorough review by applicable ES&H subject matter experts. This review results in an ES&H Evaluation and Review Report. This report gives the feedback and the agreed upon controls (from an ISM perspective) necessary to commence the project.

The AlliedSignal FM&T has implemented a Job Hazards Analyses (JHAs) program to augment the PHA process by further ensuring that all controls are in place, the associates are trained, and the hazards are properly analyzed prior to commencement of work. The JHAs assist FM&T by ensuring the associates understand and follow the work controls required for the associated hazards.

Issue:

None

Conclusion:

The Contractor is meeting the Acceptance Criteria for this Hazard Identification Objective (HAZ-1).

Submitted: *Original Signed By* Frank H. Sprague	Approved: *Original Signed By* ISMS Verification Team Leader
	Date:

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Hazard Identification	**HAZ-2**

Objective

Contractor procedures and practices ensure those contractor personnel responsible for analyzing the hazards and develop, review, or implementing the controls, have competence that is commensurate with their responsibilities. DOE roles and responsibilities are clearly defined to assure appropriate oversight and review of the analysis of hazards and the identification of controls. Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities.

Acceptance Criteria

1. Contractor ISM procedures require that personnel responsible for analyzing hazards and identification of adequate controls have competence which is commensurate with their responsibilities.

2. Personnel who analyze hazards and identify adequate controls demonstrate competence that is commensurate with their responsibility.

3. Contractor ISM procedures have clearly defined roles and responsibilities for personnel assigned to oversee, review, and approve the analysis of hazards associated with approved processes or facilities.

4. Contractor ISM procedures have clearly defined roles and responsibilities for personnel assigned to review and approve safety authorization controls.

Review Approach

Record Review:

Integrated Safety Management System FY99
Site Safety Assessment for the Kansas City Plant, September 1995
U. S. Department of Energy Contract DE-AC04-76-DP00613
Personnel Training Jackets
FM&T Qualification & Training System (QTS) (Computer Database System)
Salaried Classification Descriptions (Position Descriptions):

- Engineer (Senior)
- Manager, Environmental, Safety & Health
- Manager, Environmental, Safety & Health Operations
- President
- Director, ES&H, Materials Engineering & Technical Services
- Environmental Protection Specialist
- Environmental Protection Specialist (Senior)
- Environmental Protection Specialist, Staff

The following International Standards Organization (ISO)/Voluntary Protection Program (VPP)/Process Description (PDs) documents were reviewed:

ISO #	Title
4.3.4	Environmental Management Programs printed 7/12/99
4.4.1	Structure and Responsibility printed 7/12/99
4.4.2	Training, Awareness and Competence printed 7/12/99
4.4.3	Communication printed 7/12/99
4.5.4	Environmental Management System Audit printed 7/12/99

VPP #	Title
1.a	Commitment to Safety and Health Protection printed 7/12/99
4.a	Competent Professionals printed 7/12/99
5	Safety and Health Training printed 7/12/99

PD #	Title
01.01.03.01	Qualification/Training dated 4/26/99
01.01.03.02	Mandated Training dated 4/26/99
01.01.03.03	Development Training dated 4/26/99
01.05.03.00	Corrective and Preventive Action Process dated 4/26/99
21.01.01.01	Controlling Explosives and Production Batteries dated 9/23/96
21.01.02.03	Hoisting and Rigging dated 10/20/97
21.01.02.11	Laser Safety dated 6/30/97
21.01.03.10	Confined Spaces dated 4/26/99
21.01.04.02	Chemical Hazard Evaluation dated 6/1/98
21.02.01.02	Summary of Radiation Work Authorizations dated 11/16/98
22.01.01.01	Risk Management Pre-planning Process dated 2/2/98
22.02.02.02	Fire Protection Program Requirements Identification dated 6/22/98
22.02.02.03	Hazard Abatement dated 10/12/98
22.02.02.04	Accident/Incident Investigation and Reporting dated 3/29/99
22.02.02.07	Risk Management Maintenance Process dated 12/9/96
21.01.03.10	Environmental Compliance dated 6/22/98
22.03.01.01	ES&H Process Identification and Control dated 8/31/98
22.03.02.01	ES&H Command Media dated 8/31/98
23.01.01.01	Environmental Restoration dated 5/4/96
23.02.01.02	Pollution Prevention dated 5/3/99
23.02.02.01	Clean Air Act & Local Air Regulation Compliance dated 11/9/98
23.02.03.01	Wastewater Discharge dated 11/10/97
23.02.04.01	Waste Management dated 5/11/98
23.02.05.01	Pesticides and Toxic Substances Control dated 12/15/97

Interviews:

1. Manager, ES&H – Environmental Compliance
2. Manager, Safety and Health
3. Manager, ES&H – Waste Management
4. Staff Engineer, Environmental Operations, Site Pollution Prevention Coordinator
5. Staff Environmental Protection Specialist – Environmental Restoration
6. Staff Environmental Protection Specialist – Clean Air
7. Staff Industrial Hygienist
8. Environmental Protection Specialist, Senior

9. Divisions A, M, and E Designated Training Representative

Observations:

None

Discussion of Results

Review of the Salaried Classification Description (Position Description), training and experience records (from the FM&T QTS), and interviews with applicable FM&T personnel demonstrated that they posses the knowledge, skills, and abilities which are commensurate with their responsibilities.

The FM&T ES&H Management Plan, Process Descriptions, and Work Instructions clearly define roles and responsibilities for personnel assigned to oversee, review, and approve the analysis of hazards associated with approved and/or proposed processes or facilities. The FM&T ES&H Management Plan, Process Descriptions, and Work Instructions also clearly define roles and responsibilities for personnel assigned to review and approve safety authorization controls.

FM&T management, from the top down, has taken a highly visible and active role in the ISMS process. This was evident through the interviews with the FM&T staff and the President. The roles and responsibilities have been clearly documented and reinforced through meetings, training, and actions of management (e.g., ES&H Executive Committee, Continuous Improvement Steering Committee, Monthly Operations Meeting, All Associates Meeting, etc.). FM&T Management has helped to ensure the protection of the environment, the public, and the workers by placing highly competent personnel in the positions responsible for the implementation of the ISMS.

Noteworthy Practice:

N/A

Issue:

None

Conclusion

The Contractor is meeting the Acceptance Criteria for this Hazard Identification Objective (HAZ-2).

Submitted: *Original Signed By* Frank H. Sprague	Approved: *Original Signed By* ISMS Verification Team Leader
	Date:

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Management	**MG-1**

Objective

Contractor roles and responsibilities are clearly defined to ensure satisfactory safety, accountability, and authority to define the scope of work. Line management is directly responsible for safety.

Acceptance Criteria

1. Contractor ISM defines the roles and responsibilities of line management to ensure responsibility for safety in definition of the scope of work.

2. Contractor ISM defines clear roles and responsibilities of all personnel associated with definition of the scope of work to ensure that safety is maintained at all levels.

Review Approach

Record Review:

ES&H Management Plan, dated 10/23/98
Section 3.3, ES&H Responsibilities
Section 3.7, Organization

ES&H Management System Manual, dated 3/17/99
Section 4.4.1, Structure & Responsibilities
Section 4.3.3, Objectives & Targets

FM&T Business Model, dated 11/16/98

Agreement Between AlliedSignal Inc., Federal Manufacturing & Technologies and District Lodge No. 71, International Association of Machinists and Aerospace Workers, Effective October 14, 1996 through October 10, 1999 (Article 19).

D/25G/M Tie-in / Priority Sheet, dated 7/14/99

Traveler #1470118-101 for PID#99033ABAA dated 7/14/99

Maintenance Ticket Work Order #98323202

Maintenance Ticket Work Order #98321672

Maintenance Priority Sheet, dated 12/9/98

The following International Standards Organization (ISO)/Voluntary Protection Program (VPP)/Process Descriptions (PDs) were reviewed:

ISO #	**Title**
4.4.3	Objectives and Targets, Command Media printed 7/13/99
4.4.1	Structure and Responsibility, Command Media printed 7/13/99

VPP #	**Title**
1.b	Written Safety and Health Program, Command Media printed 7/13/99
4.a	Competent Professionals, Command Media printed 7/13/99

PD #	**Title**
01.01.03.01	Qualification/Training dated 4/26/99
02.02.03.00	Generate Factory Instructions, Tooling, and Equipment dated 4/5/99
21.01.02.01	Lockout/Tagout dated 4/19/99
21.01.02.10	Safety Tags, Signs and Barricades dated 3/1/99
22.01.01.01	Risk Management Pre-planning Process dated 2/2/98
22.02.02.10	Environmental Compliance dated 6/22/98
23.01.01.01	ES&H Command Media dated 8/31/98
23.02.01.01	Environmental Restoration dated 5/4/98
23.02.01.02	Pollution Prevention dated 5/3/99
23.02.02.01	Clean Air Act & Local Air Regulation Compliance dated 1/9/98

Classification Descriptions:
Manager, Environment, Safety and Health Operations dated 10/7/97
Director/Manager dated 1/15/96
Environmental Protection Specialist, Staff dated 5/06/96
Environmental Protection Specialist, Senior dated 5/06/96
Environmental Protection Specialist dated 5/06/96
Director, ES&H Materials Engineering & Technical dated 10/16/98
President dated 2/16/95
Manager, Environmental, Safety and Health Operations dated 10/7/97
Administrative Assistant dated 7/16/96
Manager, ES&H dated 1/15/96
Engineer (Senior) dated 5/16/97
Plater dated 4/3/69
Electronic Assembler dated 4/3/69
Inspector Electrical-Mechanical dated 4/3/69
General Machinist, Manufacturing dated 10/11/87
Manager, Facilities Engineering Project dated 2/15/96

Interviews:

Selected personnel at all levels were interviewed to determine their understanding of individual responsibilities with respect to work definition. The following personnel were interviewed:

1. FM&T President
2. Director, Mechanical and Plastic Products
3. Director, Facility Management Services
4. ES&H Manager – Management Systems
5. D25 (Reservoirs) Manufacturing Team Manager
6. D25 General Machinist
7. D25 General Machinist
8. D60/64 (Firesets/Encapsulation) Manufacturing Team Manager

9. D60 Electronic Assembler
10. D60 Electronic Assembler
11. D184 (Radio Shop) Maintenance Team Manager
12. D184 Planner/Scheduler
13. D184 Electrician
14. D97 (Plating Shop) Plater

Observations:

1. 5-Axis Milling, MC56-5XA, D25
2. Lathe – Hardinge Conquest Superslant, D25
3. Tour of D60
4. Tour of D184
5. Tour of D97

Discussion of Results

Roles and responsibilities for management and work personnel are defined through a hierarchy of documents. The ES&H Management plan, dated 10/23/98 provides a top-level overview of roles and responsibilities with respect to FM&T organization structure. Roles and responsibilities are discussed for the President, Director of ES&H and Materials Engineering/Technical Services, Site Management Team, ES&H Manager, Line Managers, and all Associates.

Lower level documents compliment the ES&H Management Plan by delineating roles and responsibilities for specific functional topics. The FM&T Business Model captures the Process Descriptions (PD) and Work Instructions (WI) for business planning and control, product design and definition, and product support and services. These PDs identify specific FM&T staff responsible for specific work/production/support activities. The WIs provide step by step instructions to meet the requirements of the PDs. Additionally, classification descriptions also communicate roles and responsibilities.

Two minor discrepancies were noted between the ES&H Management Plan and a lower level document.

1. Section 3.7 of the ES&H Management Plan states the Site Management Team is responsible for assigning work and measuring performance. ISO 14001, 4.4.1, Structure and Responsibilities refers to section 4.4.1 of the ES&H Management System Manual. This section of the ES&H Management System also discusses roles and responsibilities of the Site Management Team, but does not recognize their responsibility for assigning work and measuring performance.

2. Section 3.7 of the ES&H Management Plan states the ES&H Operations Manager, Functional Managers, Line Managers, and Team Managers are responsible for controlling processes, including suspension of operations for ES&H reasons. ISO 14001, 4.4.1, Structure and Responsibilities, refers to section 4.4.1 of the ES&H Management System Manual. This section of the ES&H Management System also discusses roles and responsibilities of the ES&H Operations Manager, Functional Managers, Line Managers, and Team Managers, but does not recognize their responsibility for controlling processes, including suspension of operations for ES&H reasons.

Issue:

MG-1: Two minor discrepancies were noted between roles and responsibilities discussed in the ES&H Management Plan and ISO 14001, 4.4.1, Structure and Responsibilities.

A review of classification descriptions was conducted. Each job description reviewed identified Duties and Responsibilities with a caveat statement saying duties identified does not necessarily include all duties performed. For management personnel, the duties identified in the job description(s) mirror the roles and responsibilities described in the top level ES&H Management Plan. For bargaining unit personnel, a boilerplate statement in their classification descriptions states "Responsible for complying with applicable provisions of Article 19, ES&H and Good Housekeeping of the Collective Bargaining Agreement." A review of Article 19 was conducted and no issues noted.

Various interviews were conducted with FM&T personnel at the work locations. First level managers clearly articulated how work is scheduled and assigned within their respective Departments. Individual machinists, electricians, assemblers, platers, and other craft personnel demonstrated a clear understanding of their responsibilities to obtain the necessary work instructions and take appropriate ES&H precautions for their assigned work.

Conclusion

The contractor is meeting the acceptance criteria for this management objective.

Submitted: *Original Signed By* Dan Pellegrino	Approved *Original Signed By* ISMS Verification Team Leader
	Date:

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Management	**MG-2**

Objective

Contractor line management responsibility for safety includes responsibility to ensure that work is performed within controls.

Acceptance Criteria

1. Contractor ISM assigns responsibility to line management to ensure that work is performed within controls.

2. Contractor ISM procedures and practices hold line management responsible for ensuring that controls to ensure work is accomplished safely are verified and maintained as required by the approved safety authorization basis.

3. Contractor procedures ensure that personnel who supervise or actually perform work within controls have competence commensurate with the responsibilities to which they are assigned.

Review Approach

Record Review:

ES&H Management Plan, dated 10/23/98
Section 3.3, ES&H Responsibilities
Section 3.7, Organization

ES&H Management System Manual, dated 3/17/99
Section 4.4.1, Structure and Responsibilities
Section 4.4.6, Operational Control

The following International Standards Organization (ISO)/Voluntary Protection Program (VPP)/Process Descriptions (PDs) were reviewed:

ISO #	**Title**
21.01.03	Structure and Responsibilities, Command Media printed 7/13/99
21.01.04	Operational Control, Command Media printed 7/13/99

VPP#	**Title**
1.a	Commitment to Safety and Health Protection printed 7/13/99
1.b	Written Safety and Health Program printed 7/13/99
4.a	Competent Professionals printed 7/13/99
5	Safety and Health Training printed 7/13/99

PD#	**Title**
22.01.01.01	Risk Management Pre-planning Process dated 2/2/98

22.02.02.07 Risk Management Maintenance Process dated 12/09/96
21.01.04.02 Chemical Hazard Evaluation dated 6/1/98
23.02.05.01 Pesticides and Toxic Substances Control dated 12/15/97

Work Instructions	**Title**
21.01.03.0-1	How to Maintain the Site Safety Assessment (SSA) dated 12/9/96

Site Safety Assessment for the Kansas City Plant dated 9/95

Classification Descriptions:
Manager, Environment, Safety and Health Operations dated 10/7/97
Director/Manager dated 1/15/96
Environmental Protection Specialist, Staff dated 5/06/96
Environmental Protection Specialist, Senior dated 5/06/96
Environmental Protection Specialist dated 5/06/96
Director, ES&H Materials Engineering & Technical Services dated 10/16/98
President dated 2/16/95
Manager, Environmental, Safety and Health Operations dated 10/7/97
Administrative Assistant dated 7/16/96
Manager, ES&H dated 1/15/96
Engineer (Senior) dated 5/16/97
Plater dated 4/3/69
Electronic Assembler dated 4/3/69
Inspector Electrical-Mechanical dated 4/3/69
General Machinist, Manufacturing dated 10/11/87
Manager, Facilities Engineering Project dated 2/15/96

D/25G/M Tie-in / Priority Sheet dated 7/14/99

Traveler #1470118-101 for PID#99033ABAA dated 7/14/99

Maintenance Ticket Work Order #98323202

Maintenance Ticket Work Order #98321672

Maintenance Priority Sheet dated 12/9/98

Interviews:

FM&T personnel at all levels were interviewed to determine their understanding and commitment to conducting work safely in accordance within controls. The following personnel were interviewed:

1. FM&T President
2. Director, Mechanical and Plastic Products
3. Director, Facility Management Services
4. ES&H Manager
5. D25 (Reservoirs) Manufacturing Team Manager
6. D25 General Machinist
7. D25 General Machinist
8. D60/64 (Firesets/Encapsulation) Manufacturing Team Manager
9. D60 Electronic Assembler
10. D60 Electronic Assembler

11. D184 (Radio Shop) Maintenance Team Manager
12. D184 Planner/Scheduler
13. D184 Electrician
14. D97 (Plating Shop) Plater

Observations:

1. 5-Axis Milling, MC56-5XA, D25
2. Lathe – Hardinge Conquest Superslant, D25
3. Tour of D60
4. Tour of D184
5. Tour of D97

Discussion of Results

The ES&H Management Plan states first level management (e.g., Team Managers) is responsible for "ensuring that associates operate in strict compliance with the polices and applicable procedural requirements in command media" and "determining and ensuring completion of training requirements for their associates." Similar roles and responsibilities for upper management are found in PD 01.01.03.03, Development Training and PD 01.01.03.02, Mandated Training. Interviews with various Team Managers were also conducted. All Team Managers interviewed appeared to be competent commensurate with their responsibilities.

A review the Site Safety Assessment for the Kansas City Plant (KCP) was conducted. Based on the hazard assessments and accident analyses performed for operations at KCP, no Safety Limits, Limiting Conditions for Operations, or associated Surveillance Requirements have been defined. As a low-hazard non- nuclear facility, a set of Administrative Controls (AC) was determined to be sufficient to control the hazards and mitigate the risks. Administrative Controls are imposed on the fire-suppression system, flood-protection system, lightning protection on selected activities, chemical inventory, and change identification/review program. Roles and responsibilities for how these controls are maintained are identified in PD#22.01.01.01, Risk Management Pre-planning Process, PD#22.02.02.07, Risk Management Maintenance Process, PD#21.01.04.02, Chemical Hazard Evaluation, PD#23.02.05.01, Pesticides and Toxic Substances Control, and WI#22.02.02.07.01, How to Maintain the Site Safety Assessment (SSA).

Interviews were conducted with various FM&T personnel at the work locations. All Team Managers interviewed stated that their associates are expected to strictly following requirements identified through Command Media. Individual machinists, electricians, assemblers, platers, and other craft personnel demonstrated a clear understanding of their responsibilities to strictly comply with the necessary process descriptions and work instructions. Observations of work activities indicate appropriate process descriptions and work instructions were the latest issue (printed that day through Command Media) and in the immediate work area.

Issue:

None

Conclusion

The contractor is meeting the acceptance criteria for this management objective.

Submitted *Original Signed By* Dan Pellegrino	Approved: *Original Signed By* ISMS Verification Team Leader
	Date:

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Management	**MG-3**

Objective

Feedback information on the effectiveness of the ISMS is gathered, opportunities for improvement are identified and implemented, line and independent oversight is conducted, and, if necessary, regulatory enforcement actions occur.

Acceptance Criteria

1. Contractor ISM procedures and practices assign line management responsibility for safety including responsibility to provide feedback and continuous improvement.

2. Contractor ISM procedures and practices describe clear roles and responsibilities to provide feedback and continuous improvement.

3. Contractor ISM procedures and practices ensure that competence is commensurate with the responsibilities to provide feedback and continuous improvement.

4. Contractor ISM procedures and practices ensure that priorities are balanced to ensure feedback is provided and continuous improvement results.

5. Contractor ISM procedures and practices require line and independent oversight or assessment activities at all levels.

6. Contractor ISM procedures and practices ensure oversight or assessment results are managed and that lessons learned are applied throughout the site; that issues are identified and managed to resolution; that fundamental causes are determined and effective corrective action plans are developed and implemented.

7. Contractor ISM procedures and practices ensure that performance measures or indicators and performance objectives are developed in coordination with DOE as required. Further, contractor ISM procedures and practices require effective management and use of performance measures and objectives.

8. Contractor ISM procedures and practices provide for regulatory compliance and enforcement as required by rules, laws, and permits such as NEPA, RCRA, CERCLA, etc.

Review Approach

Record Review:

ES&H Management Plan, dated 10/23/98
Section 3.2, Leadership & Associate Involvement
Section 3.3, ES&H Responsibilities
Section 3.4, Evaluation of ES&H Hazards, Risks & Impacts

Section 3.5, Legal, Regulatory & Other Requirements
Section 3.6, Objectives & Targets
Section 3.7, Organization
Section 3.13, Monitoring & Measurement
Section 3.14, Corrective & Preventive Action
Section 3.15, ES&H Records & Information Management
Section 3.16, ES&H Management System Self-Assessment
Section 3.17, Leadership Review

ES&H Management System Manual dated 3/17/99,
Section 4.4.1, Structure and Responsibilities

Process Descriptions
01.05.03.00, Corrective and Preventive Action Process dated 4/26/99
01.06.09.00, Internal Quality Audit dated 7/5/99
22.02.01.02, Management Observing & Promoting Safety dated 1/25/99

ISO #4.4.4.1, Structure and Responsibilities, Command Media printed 7/13/99

Performance Evaluation Report for period October 1, 1997 to September 30, 1998

Interim Performance Evaluation Report for period October 1, 1998 to May 31, 1999.

Work Instruction #22.02.01.02.01, How to Perform and Document Management Observing and Promoting Safety Tours dated 3/8/99

Memo from FMT President to all Salaried Associated, dated 1/14/99, Subject: Salaried Performance Reviews

D60 Miscellaneous Stand Down Concerns status printed 7/99

Training Attendance Report, D182 Post FG-29 dated 6/10/99

KCAO ES&H Facility Review Report for D71, Microminiature dated 3/15/99

KCAO ES&H Facility Review Report for Roof Operations dated 3/9/99

KCAO ES&H Facility Review Report for ACORN/Reservoir (D25) dated 12/10/98

KCAO ES&H Facility Review Report for FM&T High Voltage Operations, Maintenance and Safety dated 4/9/98

KCAO ES&H Facility Review Report for Printed Circuit Boards Fabrication (D61) dated 11/13/98

KCAO ES&H Facility Review Report for Plating Facility (D97) dated 4/15/97

KCAO ES&H Facility Review Report for SST/SGT Facilities dated 5/22/96

Interviews:

1. FM&T President
2. Director, Mechanical and Plastic Products
3. Director, Facility Management Services
4. ES&H Manager
5. D25 (Reservoirs) Manufacturing Team Manager
6. D60/64 (Firesets/Encapsulation) Manufacturing Team Manager
7. D184 (Radio Shop) Maintenance Team Manager
8. D184 Planner/Scheduler

Observation:

1. Corrective Action Tracking System

Discussion of Results

A review of FM&T ISM documentation indicated that FM&T have established a multitude of feedback and improvement mechanisms.

A multidisciplinary team of ES&H professionals conducts annual ES&H inspections. A formal report is issued and corrective actions are monitored. A review of the Corrective Action Tracking program indicated that actions are being monitored and closed.

The Environmental Self-Assessment Program provides line management and operators with a self-audit program to easily assess compliance with ES&H requirements. Interviews with various Team Managers indicated that these assessments are being performed routinely.

Other surveys and inspections are: Noise Evaluation; Lead in Construction/Maintenance; Subcontractor Safety; Beneficial Occupancy Inspections; Ventilation Reviews; Radioactive Material/Ionizing Radiation; Medical Surveillance Examinations; Exposure Assessments; Environmental Monitoring.

A review was conducted of KCAO ES&H Facility Reports for the last two years. Issues identified by KCAO were randomly selected to inquire what actions FM&T implemented. Issues selected were associated with labeling of specific breaker boxes (1998 issue), deficiencies with the Safety Equipment Inventory System (1998 issue), and Minimum Detectable Activity (1997 issue). In each instance, FM&T was able to demonstrate what actions were taken and that the action was closed.

Team Managers clearly articulated what ES&H metrics they track within their Department, and what their Directors expect. Individual machinists, electricians, assemblers, platers, and other craft personnel demonstrated a clear understanding of their responsibilities to obtain the necessary work instructions and take appropriate ES&H precautions for their assigned work.

Interviews with the FM&T President and the Director of Mechanical and Plastic Products were conducted. From these interviews, it was clear that FM&T "line" personnel are becoming more involved with respect to feedback and improvement.

FM&T recently established a relatively new management assessment program. The Management Observing & Promoting Safety (MOPS) program is defined in PD #22.02.01.02. This program was created to demonstrate management's commitment to the safety and health program at FM&T, create positive interactions with associates, and recognize safe work behaviors. The MOPS process requires

tours of facilities on a monthly basis by Directors and those Managers that report to the Director level. After management conducts a MOPS review, a "Working Safely" card is personally signed by management and provided to the associate. The associate can submit this card into a periodic drawing for a monetary award. Since this program is relatively new, it was not referenced in the ES&H Management Plan as an ISM mechanism to promote feedback and improvement.

Issue:

MG-3: The next revision to the ES&H Management plan should capture any new FM&T feedback and improvement initiatives.

Conclusion

The contractor is meeting the acceptance criteria for this management objective.

Submitted: *Original Signed By* Dan Pellegrino	Approved: *Original Signed By* ISMS Verification Team Leader
	Date:

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AlliedSignal Federal Manufacturing & Technologies
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Sub-team Functional Area:	**Objective Number:**
Operations and Implementation	**OI-1**

Objective

Contractor procedures and practices require work to be performed in accordance with an approved and agreed upon operations authorization.

Acceptance Criteria

1. Contractor ISM procedures and practices require that operational implementation procedures reflect the requirements of the approved operations authorization.

2. Contractor ISM procedures and practices require that work be accomplished in accordance with procedures, which reflect the controls defined in the approved operations authorization.

3. Contractor ISM procedures and practices verify, through assessment and review, that work is performed in accordance with approved operations authorization.

4. Contractor ISM procedures and practices verify that readiness to conduct work within the controls of the approved operations authorization has been achieved prior to authorizing work to start.

Review Approach

Record Review:

ES&H Management Plan, October 1998
Site Safety Assessment, September 1995
ES&H Manual, October 1998
ES&H Program Model, Command Media
JHA Program Model, Command Media

The following International Standards (ISO)/Voluntary Protection Program (VPP)/Process Description (PDs)/Work Instructions (WIs)/Job Hazard Analyses (JHAs) were reviewed.

ISO #	**Title**
4.3.2	Legal and Other Requirements printed 7/14/99
4.3.4	Environmental Management Programs printed 7/14/99
4.4.6	Operational Control printed 7/14/99

VPP #	**Title**
1.a	Commitment to Safety and Health Protection printed 7/14/99
1.b	Written Safety and Health Program printed 7/14/99
3.a	Facilities are analyzed before they are used printed 7/14/99
3.b	Comprehensive safety and health surveys printed 7/14/99
3.c	Routine hazard assessments that follow written procedures printed 7/14/99

PD #	Title
21.01.01.01	Controlling Explosives & Production Batteries dated 9/23/96
21.01.02.11	Laser Safety dated 6/30/97
21.01.03.10	Confined Spaces dated 4/26/99
21.01.04.01	Exposure Assessment dated 2/9/98
21.02.01.01	Control of Radioactive Material & Sources dated 11/16/98
22.01.01.01	Risk Management Pre-planning Process dated 2/2/98
22.02.01.01	Annual ES&H Inspections dated 5/4/98
22.02.02.00	Environmental Self Assessment Program (ESAP) dated 2/2/98
22.02.02.09	Job Hazard Analysis dated 4/6/98
22.02.02.03	Hazard Abatement, 10/12/98
22.02.02.10	Environmental Compliance dated 6/22/98
23.02.05.01	Pesticides and Toxic Substances Control dated 12/15/97

WI#	Title
21.01.01.01.01	How to Dispose of Explosives & Batteries, 6/3/96
21.01.02.11.01	How to Work Safety Around Class 3B & 4, Open Beam, 12/14/98
21.01.03.10.02	How to Fulfill Entrant Responsibilities for Confined Space, 4/26/99
22.01.01.01.01	How to Process a Preliminary Hazard Analysis (PHA), 11/2/98
22.02.02.03.01	How to Suspend & Restart an Operation for ES&H Reponses, 10/19,98
23.02.05.01.03	How to Control Toxic Substances to Comply with the Toxic Substance Control Act (TSCA), 6/29/98
23.02.05.01.04	How to Comply with Title III of the Superfund and Reauthorization Act (SARA) Sections 301-304, 4/21/97

JHA	Title
52.01.01.02.03	How to Gas Tungsten Arc Weld (GTAW), Manual, in Accordance with ES&H Requirements in D/025, 1/4/99
52.01.01.04.05	How to Operate a Class 1 Laser System Containing an Enclosed 3B or 4 Laser in Accordance with ES&H Requirements in D/93, 3/1/99

Interviews:

1. Dept 25, Reservoirs, Manufacturing Team Manager
2. Dept 25, Reservoirs, General Machinists
3. Dept 60, Fire Sets, Manufacturing Team Manager
4. Dept 60, Fire Sets, Electronic Assembler
5. Dept 97, Plating Shop – Metal Finishing, Plater
6. Dept 184, Radio Shop, Maintenance Team Manager
7. Dept 184, Radio Shop, Planner & Scheduler
8. Dept 184, Radio Shop, Electrician
9. Dept SH-2, ES&H Management Systems Manager
10. Dept SH-2, PHA Coordinator
11. SS-1, Technical Projects Specialist

Observations:

1. Observed machinist operate 5-axis milling machine in Dept 25, Reservoirs.
2. Observed machinist operate lathe machine in Dept 25, Reservoirs.
3. Toured workstation of electronic assembler in Dept 60, Fire Sets.
4. Toured workstation of electrician in Dept 184, Radio Shop.
5. Toured workstation of plater in Dept 97, Plating Shop – Metal Finishing.

Discussion of Results

The ES&H Management Plan discusses the Site Safety Assessment (SSA) for the KCP that was approved by DOE in September 1995. The SSA classifies the KCP as a low hazard, non-nuclear facility. As such, AlliedSignal FM&T is authorized to conduct activities as a low hazard, non-nuclear facility without further DOE review and approval, contract modification, or authorization agreement provided the thresholds are not exceeded. Should new business or modifications to existing processes exceed the identified thresholds, the necessary DOE review and approvals will be obtained prior to process start-up.

The hazardous materials that are used or stored at AlliedSignal FM&T are in accordance with OSHA and EPA regulations or under the control of DOE programs. Hazardous materials are divided into three categories and thresholds are identified to determine when additional regulatory or program requirements may be needed to ensure operations within acceptable risk limits. The categories and thresholds are:

1. Energetic Material. The storage, handling, testing, use and shipping of explosives (energetic materials) at AlliedSignal FM&T will be limited to materials shipped as United Nations Organization Hazard Class 1, Divisions 3 (1.3) or 4 (1.4).

2. Radiological Material. AlliedSignal FM&T radiological inventory will not meet or exceed threshold quantities of radionuclides for higher hazard class categories 2 and 3.

3. Hazardous Chemicals. The standards establishing thresholds are OSHA's Process Safety Management (OSHA 1910.119); Environmental Protection Agency's Risk Management Rule (40 CFR 68), Regulated Hazardous Air Pollutants and Accidental Release Chemicals; and the Threshold Planning Quantities listed in 40 CFR 355.

The thresholds are categorized and discussed in Section 1.0 of the ES&H Management Plan that is revised annually and approved by the Contracting Officer. The thresholds are also referred to as the operations authorization.

Most of the AlliedSignal FM&T operational procedures that were reviewed did not reflect the requirements of the operations authorization since most of these procedures do not influence or impact the thresholds identified in the ES&H Management Plan. WI #21.01.01.01.01, "How to Dispose of Explosives and Batteries," did reflect the requirements of the thresholds which was appropriate because it is more related to the thresholds. All operational procedures need not reflect the requirements of the operations authorization. AlliedSignal FM&T is reflecting the requirements of the operations authorization in the appropriate documents.

AlliedSignal FM&T is performing work in accordance with procedures. Several AlliedSignal FM&T personnel were interviewed regarding job assignments and performing their work according to procedures. All were very knowledgeable in the process of receiving their job assignments and associated work procedures. Retrieval of work procedures is through a computerized product travel system. The "traveler" is a compilation of process descriptions, general process instructions, work instructions, or process engineering specifications that is required for each task. Each associate acknowledged that if something seemed out of the ordinary or didn't make sense they would stop work and immediately go to their supervisor.

All the managers interviewed confirmed they were doing self-assessments as part of the Environmental Self-Assessment Program either monthly or bi-monthly. Several documented self-assessments were reviewed. Assignments were given to personnel for corrective actions of any unsafe conditions. Unsafe conditions identified were being tracked and identified as either closed or open.

AlliedSignal FM&T's Command Media contains a flowchart system that provides an easily accessible, graphical presentation of the hierarchy of ES&H documents (ES&H Management Plan, Process Descriptions, and Work Instructions). This flowchart system is applied to the ES&H Program Model and the JHA Program Model. For the ES&H Program Model, it starts off with the ES&H Management Plan (umbrella document) then branches off to other topical areas (i.e. Associate Safety and Health, ES&H Business Planning and Control, and Environment and Waste Management). These topical areas then flow down to lower topical areas. For example, ES&H Business Planning and Control branches down into Pre-planning for ES&H, Administration of ES&H Program, and Management Control. This process continues to flow down until you come to Process Description documents that link Work Instructions associated with each PD. This process is also applied to the JHA Program Model.

Noteworthy Practice OI-1: Command Media is an excellent configuration management system and promotes an easy-to-understand perspective of how FM&T practices fit together to form their ISM system.

As a result of an interview with a Technical Projects Specialist, it became known that the PHAs that were being submitted to the AlliedSignal FM&T ES&H personnel had to be worked back and forth with the initiating organization, sometimes up to several months. As a result of this, a Technical Projects Specialist now interfaces with the initiating organization during the development of the PHA for new business projects, modification to an existing facility, piece of equipment, process, or new material. This has resulted in development of a PHA to about a week.

AlliedSignal FM&T has identified the JHA Program as an improvement area and personnel are working it. Improvement areas identified by AlliedSignal FM&T include modification/generation of some JHAs and establishes a linkage between JHAs and Work Instructions. Currently, there is an annual administrative check between the JHA and Traveler to ensure that all safety controls for each job have been included in the Traveler. The goal is to link the Travelers to the JHA and also have an electronic flowchart, similar to the ES&H Manual, that AlliedSignal FM&T associates have access to.

AlliedSignal FM&T management acknowledged that there are some low risk tasks that JHAs have not been performed. AlliedSignal FM&T also identified the need to further develop the JHA program. Some JHAs are outdated and some controls were not identified. DOE encourages AlliedSignal FM&T to perform a review of all work that is performed at the KCP to ensure that the work is covered by JHAs.

Issue

OI-1: AlliedSignal FM&T has not yet completed modification/generation of all JHAs, nor has AlliedSignal FM&T established a linkage between JHAs and Travelers.

Conclusion

This performance objective and acceptance criteria have been met.

Submitted: *Original Signed By* Jody Eggleston	Approved: *Original Signed By* ISMS Verification Team Leader
	Date:

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AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Operations and Implementation	**OI-2**

Objective

The contractor has established clear roles and responsibilities to ensure that work is performed within controls.

Acceptance Criteria

1. Contractor ISM procedures and practices clearly identify roles and responsibilities for line management in a manner to ensure work is planned, approved, and conducted safely. Line management is responsible for safety.

2. Contractor ISM procedures and practices ensure that support organizations with primary capability to develop and implement hazard controls have clearly defined roles and responsibilities.

Review Approach

Record Review:

ES&H Management Plan, October 1998
Manager, Manufacturing Operations, Salaried Classification Description, May 1996
Manager, Facility Service Center, Salaried Classification Description, September 1996

The following International Standards (ISO)/Voluntary Protection Program (VPP)/Process Description (PDs) were reviewed.

ISO #	**Title**
4.3.4	Environmental Management Programs printed 7/14/99
4.4.1	Structure and Responsibility printed 7/14/99
4.4.2	Training, Awareness and Competence printed 7/14/99

VPP #	**Title**
1.a	Commitment to Safety and Health Protection printed 7/14/99
1.b	Written Safety and Health Program printed 7/14/99
3.a	Facilities are analyzed before they are used printed 7/14/99
3.b	Comprehensive safety and health surveys printed 7/14/99
3.c	Routine hazard assessments that follow written procedures result in written printed 7/14/99
3.d	Routine examination and analysis of hazards associated with individual printed 7/14/99

PD #	**Title**
21.01.02.01	Lockout/Tagout (LOTO) dated 4/19/99
21.01.04.01	Exposure Assessment dated 2/9/98
22.01.01.01	Risk Management Pre-planning Process dated 2/2/98
22.02.02.09	Job Hazard Analysis dated 4/6/98

23.02.05.01 Pesticides and Toxic Substances Control dated 12/15/97

Interviews:

1. Dept 25, Reservoirs, Manufacturing Team Manager
2. Dept 60, Fire Sets, Manufacturing Team Manager
3. Dept 184, Radio Shop, Maintenance Team Manager

Observations:

1. Observed machinist operate 5-axis milling machine in Dept 25, Reservoirs.
2. Observed machinist operate lathe machine in Dept 25, Reservoirs.
3. Toured workstation of electronic assembler in Dept 60, Fire Sets.
4. Toured workstation of electrician in Dept 184, Radio Shop.
5. Toured workstation of plater in Dept 97, Plating Shop – Metal Finishing.

Discussion of Results

The ES&H Management Plan describes the ES&H initiatives that AlliedSignal FM&T leaders and associates have integrated into work activities. Total Quality Leadership – This process involves all FM&T associates as stakeholders in problem-solving and continuous improvement.

1. Auditing for Safety – This program requires senior management to periodically walk-through and review their areas to reinforce observed safe behaviors and practices.

2. Environmental Self-Assessment Program – This program provides management and associates with a self-audit program to easily assess their areas for unsafe conditions and initiate corrective actions.

3. Job Hazard Analysis Program – This program requires development of JHA documentation to include both operator and line management input to the identification of hazards and their control.

AlliedSignal FM&T line management is committed to integrate ES&H requirements into all phases of activities. This involvement is evident in the ES&H Management Plan. The plan identifies numerous ES&H programs and processes that AlliedSignal FM&T line managers and associates have integrated into their work activities. These programs and processes establish AlliedSignal FM&T line management roles and responsibilities that ensure work is performed within controls.

During the review several salaried classification descriptions of line managers were reviewed. These documents clearly delineated the roles and responsibilities of the position. These salaried classification descriptions describe that it is line management's responsibility to ensure work is performed in a safe manner and in accordance with established ES&H requirements.

Several AlliedSignal FM&T personnel were interviewed along with observing two tasks in process. These associates were very knowledgeable about their job assignments and their roles regarding ES&H. All associates knew that once they received a job assignment they were to pull up the traveler, which could consist of process descriptions, general process instructions, work instructions, or process engineering specifications. These work instructions identified safety controls necessary to safely perform the work. Each acknowledged that if something seemed out of the ordinary or didn't make sense they would immediately go to their supervisor.

Two maintenance managers and an electrician were interviewed during the review. They described their roles and responsibilities as a support organization. The managers described the process of receiving a work request through their maintenance database, Maximo. They were knowledgeable regarding the process of inputting the request and ensuring qualified maintenance personnel were assigned to the job. They also ensured any safety requirements and controls were part of the work package. The electrician was knowledgeable regarding his roles and responsibilities in receiving a work package from his manager. He was aware of his role to review the work package and ensure all safety controls were available. He also described if a situation wasn't as the work package described he was to stop work and immediately go to his supervisor. Both managers described that when the work order was complete they would notify the requesting organization that the request was complete.

Issue:

None

Conclusion

This performance objective and acceptance criteria have been met.

Submitted: *Original Signed By* Jody Eggleston	Approved: *Original Signed By* ISMS Verification Team Leader
	Date:

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AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
DOE Acquisition Regulation	**DEAR-1**

Objective

The ISMS Description is consistent and responsive to the DOE Policy 450.4, the DEAR, and the direction to the contractor from the Contracting authority. FM&T policies and procedures insure that the ISMS description is maintained, implemented, and that implementing mechanisms result in integrated safety management.

Acceptance Criteria

1. *ISMS Description Consistency* - The FM&T ISM System description is consistent with the DOE Policy, the DEAR Requirements for Integrated Safety Management, and the Contracting Officers' direction to FM&T.

2. *ISMS Implementation* –FM&T has mechanisms in place to direct, monitor, and verify the implementation of the ISMS as described in the system description.

3. *ISMS Description Maintenance* – FM&T has assigned responsibilities and established the mechanisms to insure that the ISMS description is maintained current and that the annual update information is prepared and submitted.

Review Approach

Record Review:

FY99 Integrated Safety Management System (ISMS) Document
Appendix B of the ES&H Management Plan
Contract Number DE-AC04-76DP00613

Interviews:

1. Manager, Kansas City Area Office (KCAO)
2. President, Allied Signal Federal Manufacturing & Technologies (FM&T)
3. Projects and Facilities Program Manager, KCAO
4. Environment, Safety, and Health (ES&H) Program Manager, KCAO

Observations:

None

Discussion of Results

The DOE Voluntary Protection Program (VPP), the International Standards Organization (ISO) 14001 Environmental Management Standard, the Environmental, Safety, and Health (ES&H) Management Plan,

and the Allied Signal Federal Manufacturing & Technologies (FM&T) Quality Manual, satisfy the components of Department of Energy Policy (DOE P 450.4), "Safety Management System Policy," the Department of Energy Acquisition Regulation (DEAR) Requirements for Integrated Safety Management, and the Contracting Officers' direction to FM&T. This is clearly stated in the FM&T ES&H Management Plan.

The FM&T ISM System description is consistent with the DOE P 450.4, the DEAR Requirements for Integrated Safety Management, and the Contracting Officers' direction to FM&T as stated in the FM&T ES&H Management Plan.

FM&T have mechanisms in place to direct, monitor, and verify the implementation of the ISMS as described in the system description. This was evident after interviews with KCAO and FM&T personnel. All applicable personnel in the KCAO and the FM&T are cognizant of the requirements of the ISMS and verify the mechanisms in place to direct, monitor, and verify the implementation are adequate.

FM&T has assigned responsibilities and established the ad-hoc mechanisms to insure that the ISMS description is maintained current and that the annual update information is prepared and submitted. The FM&T personnel responsible for the ISMS description and plan maintain a continuous (i.e., on a more than annual basis) review and update of the plan. However they do not have a formal documented methodology (i.e., procedure or description) of how they accomplish this task.

Issue

DEAR-1: A description of the process used by FM&T for maintenance of their ISM System Description does not exist.

Noteworthy Practice:

None

Conclusion

The Contractor is meeting the Acceptance Criteria for this DOE Acquisition Regulation Objective (DEAR-1).

Submitted: *Original Signed By* Frank H. Sprague	Approved: *Original Signed By* ISMS Verification Team Leader
	Date:

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AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area: **Department of Energy (DOE) Kansas City Area Office**	**Objective Number:** **DOE-1**

Objective

The Department of Energy (DOE), Kansas City Area Office (KCAO), has effective mechanisms to interface with Allied Signal Federal Manufacturing & Technologies (FM&T) to ensure proper oversight of the FM&T Integrated Safety Management System (ISMS).

Acceptance Criteria

1. KCAO has an effective day-to-day operational interface with the FM&T for oversight of their ISMS.

2. KCAO has an effective means to ensure the business operations concerning the FM&T ISMS is adequate and updated as required.

3. KCAO has a sufficient interface with FM&T to ensure proper oversight of their mission with respect to their ISMS.

Review Approach

Record Review:

Integrated Safety Management System FY99, dated January 6, 1999
Site Safety Assessment for the Kansas City Plant, September 1995
U. S. Department of Energy Contract DE-AC04-76-DP00613
Performance Evaluation Report, Allied Signal Federal Manufacturing & Technologies, Kansas City Plant, For the Period October 1, 1997 to September 30, 1998
Interim Performance Evaluation Report, Allied Signal Federal Manufacturing & Technologies, Kansas City Plant, For the Period October 1, 1998 to May 31, 1999.
Organizational Chart for the Kansas City Area Office, dated May 1999.
Organization, Authorities, and Functions (AL1120), Kansas City Area Office, dated November 18, 1994
Kansas City Area Office Roles & Responsibilities document, dated 7/16/99
Kansas City Area Office Operations Representative Program Plan, dated December 1998
ES&H Facility Review Reports (7 reports, 1997 – Present)
Print out of the OPSACTS Reviews for FY1999

Interviews:

1. Manager, KCAO
2. Operations Representative, KCAO
3. Program Manager, Weapons & Technology Programs, KCAO (Acting Assistant Manager), Office of Stockpile Management
4. Projects and Facilities Program Manager, KCAO
5. Environment, Safety, and Health (ES&H) Program Manager, KCAO

Observations:

1. Observed the capabilities and the use of the KCAO Operations Representative's Database for Field Observation, Team Assessment, and ES&H Facility Review Reports (OPSACTS).

Discussion of Results

The KCAO relies on their Operations Representatives (KCAO version of the DOE-wide Facility Representative Program) to ensure effective day-to-day operational interface with the FM&T for oversight of their ISMS. The Operations Representative roles, responsibilities, and their required knowledge, skills, and abilities are described in the KCAO Operations Representative Program Plan. There are currently three people assigned as Operations Representatives at KCAO. They are required to spend the majority of their time in their assigned areas doing oversight of the day-to-day operations. The Operations Representatives are required to complete 3-6 Field Observation Reports per year per Operations Representative, one to two ES&H Facility Review Reports per year per Operations Representative, four Team Assessment Reports per year on selected ES&H topics, and Informal Reports (Eyes & Ears Reports) as issues or problems present themselves on a daily basis. KCAO Operations Representatives have done a total of ten Reports for FY 1999. Issues identified in the Operations Representative Reports are entered into the KCAO Database for Field Observations. Systemic issues are communicated to FM&T management. It is the responsibility of the Operations Representatives to ensure that the KCAO has an effective day-to-day operational interface with the FM&T for oversight of their ISMS.

The KCAO Office of Technical Management (OTM), the Office of Resources Management and Security, and the Office of the Manager provide an effective oversight of the business operations concerning the FM&T ISMS. Key functions involve day-to-day contract administration, evaluation of contractor performance, financial and budget administration, oversight of ES&H regulatory issues, and site security.

The KCAO Office of Stockpile Management is responsible for the Quality Programs and Weapons & Technology Programs. A Program Manager leads the Quality Program with a staff of one Program Analyst, five Quality Assurance Engineers, and seven Quality Assurance Specialists. The primary function of this group is to implement the DOE/AL Quality Assurance Program defined in DOE/AL Quality Criteria (QC-1). From June 1998 through May 1999, the QA Engineers performed 32 QA assessments (QAS 3.0). During the same period, the QA Specialists performed 19 QA assessments (QAS 4.0) and completed 483 Certificates of Inspections. That equates to DOE acceptance of 883 components. The Weapon & Technology Program is led by a Program Manager with staff of two Industrial Specialists, one Weapon Engineer, and one Operations Engineer. This group provides day-to-day interface between DOE/AL Weapon Programs Division and FM&T for weapon program issues.

A new Area Manager was appointed to KCAO on 5/10/99. Efforts to update individual KCAO roles and responsibilities have been recently approved. A review of the KCAO Roles and Responsibilities document was conducted. This document supplements the AL Functions, Roles, and Responsibilities document (AL 1120). Specific roles and responsibilities are identified for individual KCAO personnel by name.

A review of the last two Performance Evaluation Reports transmitted from KCAO to FM&T was performed. Both evaluations indicated that DOE has provided feedback to FM&T on ISM performance. This information is factored into FM&T's Coast Plus Award Fee.

Issue:

None

Conclusion:

The KCAO is meeting the Acceptance Criteria Department of Energy (DOE) Kansas City Area Office (DOE-1).

Submitted *Original Signed By* Dan Pellegrino	Approved: *Original Signed By* ISMS Verification Team Leader
Submitted *Original Signed By* Frank Sprague	Date:

Criteria, Review, and Approach Documents
1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies, New Mexico
Assessment Form

Subteam Functional Area:	**Objective Number:**
Program Management	**NMPM-1**

Objective

A comprehensive Safety Management System (including environment, safety and health) systematically integrates ES&H into management and work practices at all levels, synergistically combines individual ES&H management systems and resources, and holds line and program management accountable for performance.

Acceptance Criteria

1. Using a graded approach, a comprehensive Safety Management System is maintained for contractor managed facilities.

2. The basis for continuing operations at contractor managed facilities is established through the site contract and is further implemented by the requirements and commitments contained in the ES&H Management Plan, the contractor Quality System, the standards included in the Operating Requirements Database/Standards List, the Site Safety Assessment, periodic Hazard Assessments, and pertinent National Environmental Policy Act (NEPA) documentation.

3. A complete and updated listing of applicable laws, regulatory requirements, agreements, permits, and Department of Energy (DOE) Directives is maintained and integrated into a system which ties them to work instructions and/or process descriptions.

4. A formal controlled process exists and is utilized for creating, reviewing, updating, approving and distributing ES&H procedures, work instructions, and process descriptions.

5. Any adopted ES&H management systems are efficiently and effectively integrated with previously established quality management systems.

6. Management commitment to ES&H at all levels is clearly stated, demonstrated by policies, participation and actions, and reinforced by a culture which seeks continuous ES&H improvement.

7. The consistency and formality of operations at contractor managed facilities are continuously improved, and appropriately reflect the degree of risk and general industry practice.

8. Facility inspections, reviews, compliance checks, monitoring programs, etc. are effectively utilized to ensure that industrial, maintenance and construction operations, ES&H practices and housekeeping meet defined management standards. Problems are documented and assessed and corrective actions are taken to improve performance.

9. Appropriate and required documentation concerning past, present and expected ES&H performance is maintained.

Review Approach

Record Review:

Management ES&H Audit – PD 11.07.01.03
Environment Self-Assessment Program (ESAP), PD 11.07.01.08
Organizational Environment, Safety and Health Meetings, PD 11.07.01.10
Command Media Description, PD 11.06.02.00
How to Revise Command Media, WI 11.06.02.00.02
FY98 Environment, Safety and Health Management Plan, dated October 17, 1997
FY99 Environment, Safety and Health Management Plan, dated October 23, 1998
Risk Engineering Assessment, prepared by Zurich, dated October 27, 1998
Ergonomics Assessment, prepared by Zurich, dated July 22, 1999
Internal Occupational Health and Medical Audit, AlliedSignal, dated April 1998
Hazard Survey, dated January 8, 1997
ESAP Frequency List
Management ES&H Audit – PD 11.07.01.03
Qualification and Training - PD 11.01.00
How to Identify and Document Qualification Requirements – WI 11.01.01.00.01
How to Identify and Document Qualification and Training Information – WI 11.01.01.00.02
How to Verify Qualification and Training Information and Determine Qualification Status – WI 11.01.01.00.03
How to Establish and Implement a Qualification Plan – WI 11.01.01.00.04
Mandated Training – PD 11.01.02.00
Quality Assurance Program Plan
MEMF Monthly Safety Notes
ES&H Weekly Safety Checklist, MEMF
Job Descriptions for:
  Vice President,
  Director
  Management Project Specialist,
  Engineer,
  Maintenance Worker
Performance Review Memo, dated 1/14/99, from President to Salaried Performance Reviewers
Performance Review Form
Bi-Monthly Accomplishment Reports – 6/21/99, 4/30/99, 2/12/99
ES&H Metrics, 8/10/99
Service Subcontract Safety Handbook, 7/7/98
FM&T/NM Team Charter Status Report, 8/12/99
Job Hazard Analysis for:
  Material Handling Plan,
  Spray Paint Waste Minimization,
  Substance Abuse Testing,
  Ergonomics,
  Shop & Material Organization,
  ESAP,
  Data /Team Chartering Worksheet
Shelf-life system presentation
Management Review, 5/25/99
Quality Manual (10.00)
How to Conduct and Document ES&H Audit – WI 11.07.01.03.01
Visitor – New Hire Safety – PD 11.07.01.09

Organizational ES&H Meetings – PD 11.07.01.10
Occupational Safety and Medical Audit, Albuquerque, 5/22/98
Team Charter, Team K-2086, TQMP Leadership Alignment Team Tracking
Team Charter, Team K-2020, Committed Workload Measurement and Tracking System
ESAP Checklist
Safety Leadership Training
Stop Work Memo, 10/16/97, from VP to all employees
ES&H Assurance Letters
Minutes of Management Review, 5/25/99
RCRA Inspection of Allied Signal, NM by Kirtland Area Office, 7/16/98
Explosives Safety Restart Findings Closure Memo, 12/21/98

Interviews:

Manager, Financial Management and Planning
Program Manager
1. Technical Project Specialist
2. Manager, Cost and Budget Services
3. Accountant
4. Project Manager for TSD Communications
5. Administrative Analyst, MEMF
6. Senior Engineering Technologist
7. Manager, Technical Services, KT7

Observations:

1. Mobile Electronics Facility
2. KT7 activities – Building 106, 125
3. CRADDOCK Facility
4. Armory

Discussion of Results

The Safety Management System is clearly laid out in the Environment, Safety and Health (ES&H) Management Manual. This manual sets the commitments for management and integrates environmental, safety and health requirements into all phases of activities. The Quality Manual clearly defines graded approach. The commitments are then implemented through the Process Descriptions (PIs) and Work Instructions (WIs) within the Command Media System used by management and associates.

The Command Media system is a very effective tool at integrating ES&H requirements into all phases of activities. All associates are required to review their PDs and WIs at the beginning of each week prior to initiating work. Changes made to PDs and WIs are done formally and are controlled and managed. Associates are encouraged not to maintain hard copy of any PDs or WIs since they do change.

An effort has been made with linking the established systems with Integrated Safety Management (ISM). Recently, a "Safety Leadership Training" has been conducted to relate the current FM&T system with ISM. In discussions with ES&H staff, approximately 80% of the associates have been through the Safety Leadership Training. In addition, every associate interviewed was asked about the training and all had an understanding of ISM. However, little documentation exists regarding how the pieces of FM&T/NM's operating system meet the functions and principles of ISM. Each associate attending the training receives a hard copy of the training materials. However, these training materials do not clearly define the FM&T/NM ISM system. ISM is clearly defined within the FY98 and FY99 ES&H Management Plans,

however this document has very limited distribution within the FM&T/NM organization. When asked for a copy of the FY99 plan, it took several phone calls and looking by the ES&H staff to get a copy. This document could easily be accessible by all associates via the Command Media system.

The ES&H staff appear to know the applicable laws, regulatory requirements, agreements, permits and Department of Energy Directives, however no formal listing is maintained in New Mexico. They rely on a "BNA mailing service" to keep them informed on laws and regulations. The Kansas City facility maintains a listing of applicable laws, regulatory requirements, agreements, permits and Department of Energy Directives for both Kansas City and New Mexico, but New Mexico does not have ready access to this list. Access should be provided to the New Mexico facility. Although it is clear that there is an understanding of the applicable laws and regulations by some individuals, making everyone more aware would be to the benefit to all of the workers.

Issue:

NMPM-1: FM&T/NM does not have ready access to the applicable laws, regulatory requirements, agreements, permits and Department of Energy Directives.

A review of the FM&T/NM Hazard Survey revealed that this document is similar to an authorization agreement between the facility and the Kansas City Area Office, identifying the facility as a small user or handler of hazardous materials, exempting them from annual inventory reporting. Even though all chemical purchases are reviewed by ES&H and a Hazardous Material Database is maintained, no facility inventory exists. At the beginning of each year, ES&H reviews the total annual purchases of chemicals for the previous year for air permitting compliance verification and the data from this review is used to validate that hazardous material inventory reporting thresholds have not been approached. ES&H also conducts quarterly inspections of all chemical storage cabinets. This process should be modified to obtain facility inventories.

Management commitment to ES&H is clearly stated in the job descriptions reviewed for the Vice President and for a Management Project Specialist, Engineer, and Maintenance Worker at FM&T/NM. The job descriptions included a statement that the activities would be conducted in a safe and health conscious manner. Stop work authority was also called out in the job descriptions. All FM&T/NM associates have signed a letter from the Vice President that discusses their responsibilities to stop unsafe work. Additionally, Assurance Letters have been signed by all of the Vice President's direct reports, assuring they promote a culture of ES&H. The Vice President, in turn, signed an Assurance Letter, titled "1999 Health, Safety and Environment Assurance Letter for FM&T/NM committing to an ES&H culture.

Management commitment to ES&H is demonstrated by a memo, dated January 14, 1999, from the President of FM&T that directed all salaried performance reviewers to document environment, safety and health (ES&H) performance for all associates on their performance evaluations. The performance review form, which is used to document the performance evaluation on FM&T associates, includes a block for documenting ES&H performance.

Management commitment to ES&H is demonstrated by policies in which ES&H status at FM&T/NM is tracked, discussed and evaluated in reports prepared by FM&T/NM. In the Bi-Monthly Accomplishment Report forms reviewed, ES&H has a dedicated section that reports the current status of ES&H initiatives. The Monthly ES&H Metrics report shows metrics on items such as recordable case rate, injury/illness statistics, and safety cost index. The organizational design of ES&H programs and the associated roles and responsibilities clearly support DOE ES&H goals and objectives and enhance facility ES&H performance. ES&H goals, objectives and strategies are integrated into the management and operations of FM&T/NM and are apparent in published policies, work instructions and process descriptions as well as in the observed conduct of facility personnel.

The Service Subcontract Safety Handbook, dated July 7, 1998, discusses the ES&H responsibilities of subcontractors hired by FM&T/NM. This handbook documents how a subcontractor should interface with FM&T/NM on ES&H related issues. This handbook shows the FM&T/NM takes ES&H responsibility for subcontractors.

FM&T/NM seeks continuous improvement by chartering quality improvement teams to suggest improvement to systems and polices within FM&T/NM. Many of these teams deal with ES&H issues. The team's progress is tracked and status reports were reviewed.

The ES&H Manual shows a consistency and formality of ES&H operations at FM&T, NM. The manual discusses the forming of continuous improvement quality teams to address issues associated with operations. The Quality Manual further details the operation of quality improvement teams. The results of ES&H and other inspections, reviews, compliance checks, monitoring programs, etc., and the lessons learned from KCP and other facilities, has lead to improvements in the effectiveness of FM&T/NM managed ES&H programs.

The Team Charter Status Log was reviewed and random selected team charters and reports were reviewed. These documents demonstrated that FM&T/NM is committed to having continued quality improvement of operations. The quality improvement teams are well organized with team charters, a management champion, team leader and members selected. Teams can elect to have a facilitator or not. FM&T/NM maintains a cadre of trained facilitators, or outside facilitators (i.e., Sandia) can be used as desired by the team. Team status is tracked and recorded monthly. Team results are recommended to management and mostly implemented. Implemented results are tracked.

Up to date written procedures, work instructions and process descriptions are maintained to provide direction for operating the facility within its designed parameters. Work instructions and process descriptions were reviewed for various activities.

Facility inspections, reviews, compliance checks, monitoring programs, etc. are performed at various levels by multiple organizations. The Kirtland Area Office (KAO) performed a Resource Conservation and Recovery Act (RCRA) inspection at FM&T/NM. This inspection was performed for the Kansas City Area Office (KCAO) and the KAO report was addressed to KCAO for tracking and follow-up on concerns identified.

The Allied Signal Corporate audit report for the occupational health and medical audit performed in April 1998 was reviewed. Audit findings were recorded, an action plan was developed and actions to address deficiencies were initiated according to the action plan. All of the noted deficiencies have been addressed.

The Kirtland Air Force Base Weapons Safety Office conducted their annual inspection of FM&T/NM facilities for explosives safety in November 1998 with Albuquerque Operations Office (AL) staff accompaniment. The AL transportation group conducted an explosive safety assessment in 1996 and the closeout documentation for that assessment was reviewed. Also, the ES&H division of AL conducted a performance assessment in late 1998 on explosive safety. All of the assessment findings are tracked and closed out when the action is completed.

FM&T/NM has a self-assessment program for ES&H. Areas of assessment such as work place safety, air quality, personnel protective equipment, fire protection, etc. were reviewed. The checklists included information on the frequency of the inspection, the person making the assessment, the date of the assessment, the department and location inspected, and the actual checklist. The checklist is customized for the area of safety that is being reviewed.

Zurich Associates did an ergonomic assessment for FM&T/NM in July 1999. This private company has been hired to perform ES&H reviews for FM&T/NM. The observation, review and use of ES&H records, statistics, tracking mechanisms, report submissions, and close out of issues, etc., and the demonstrated response to DOE or regulatory agency requests for information indicated that appropriate and required ES&H documentation is being maintained.

A concern that was noted was that there appeared to be no review of the hazards associated with a power carpet cutting tool that was being used in the phase II modification to the TSD tractors within the Craddock facility. The guarding of the tool to prevent operator injury and the switch which allow the tool to remain on even when no hand pressure is applied could be of possible concern. The use of the tool had been reviewed for ergonomic purposes, but a hazard evaluation for the tool was apparently not performed.

Issue:

NMPM-1.1: A hazard evaluation was not performed for a carpet cutter tool was not performed.

Documentation concerning past, present and expected ES&H performance is maintained in at least two systems. The Bi-Monthly Accomplishment Report the ES&H section that reports the current status of ES&H initiatives. The Monthly ES&H Metrics report shows metrics on items such as recordable case rate, injury/illness statistics, and safety cost index. This metrics report is a good tool for identifying past and present ES&H performance and projection for future performance.

Conclusion

This performance objective and associated acceptance criteria have been met.

Submitted: *Original Signed By* Rick Schassburger / Dean Treibel	Approved: *Original Signed By* Team Leader
	Date:

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies, New Mexico
Assessment Form

Subteam Functional Area:	Objective Number:
Program Management	**NMPM-2**

Objective

The contractor ensures that for its programs and operations, ES&H risks are identified and comprehensively analyzed; that Reliability and Maintainability (RAM) issues are considered early in the design phases of projects, and that risk reduction resources are allocated appropriately.

Acceptance Criteria

1. ES&H risks and liabilities are formally and periodically assessed.

2. The impacts, risks, liabilities and potential liabilities of new projects, programs or activities are determined early in the planning process.

3. The results of both formal and informal risk analyses are applied in accordance with set risk criteria and effectively used to make decisions and to develop mitigating measures for ongoing or planned projects, programs or activities.

4. Risks to plant personnel, the public and the environment are continually reduced.

5. Contractor ES&H staffing is appropriate to the degree of risk, is sufficient to achieve DOE ES&H goals and objectives, and is consciously compared to the levels maintained by similar private sector companies.

6. The integrity and effectiveness of ES&H risk management and resource allocation are periodically reviewed and revisions are made when warranted.

7. Budgeting, financial planning and resource allocation for ES&H programs is comparable in priority and formality to the processes used for facility production activities and other organization functions.

Review Approach

Record Review: (PDs, WIs, and Forms printed 8/17/99)

FM&T/NM Business Model, dated 6/7/99
FM&T/NM Organization, dated 6/1/99
PD11.04.05.00, Business Planning,
PD11.03.02.00, Time Reporting
PD11.04.01.00, Strategic Planning
PD11.07.01.04, Emergency Management
PD11.07.05.14, Explosive Control Program
PD11.07.01.08, Environmental Self-Assessment Program (ESAP)
PD11.07.01.03, Management ES&H Audit
PD12.04.01.00, Project Management

PD11.07.01.01, Preliminary Hazard Analysis
WI12.04.01.00.08, How to Develop an Estimate
WI11.07.01.01.01, How to Process a Preliminary Hazard Analysis
WI12.04.01.00.03, How to Report Deliverables and Shipping Performance
Preliminary Hazard Analysis Determination checklist, dated 6/7/99
NM0066, Preliminary Hazard Analysis Checklist for Materials, dated 7/7/99
NM0065, Preliminary Hazard Analysis Checklist for Equipment, dated 7/7/99
NM0063, Preliminary Hazard Analysis Checklist for Facilities, dated 7/7/99
NM0064, Preliminary Hazard Analysis Checklist for Processes, dated 7/30/99
NM0114, Contract Review Checklist, dated 7/7/99
NM0155, FM&T/NM Project Cost Estimate Work Sheet, dated 2/98
KO266-6 Project Statement of Work (Work Request) form, dated Oct 95
Quality Manual 10.001/14/99
Memo from Karen Clegg to All Salaried Associates, subject Salaried Performance Reviews
Job Descriptions: Vice President, Management Project Specialist, Senior Engineer, and Maintenance
July ES&H Metrics, dated August 10, 1999
FM&T/NM 1999-2003 Strategic Plan
FM&T 1999-2006 Strategic Action Plan
FM&T/NM Team Charter Status Report, dated August 12, 1999
Correction Tracking System screen
PM Documentation for KTB2, TSD Communications
PM Documentation for KTB3325, Relay Site Surge Protection
PM Documentation for KTB5, CRADDOCK
MEMF Monthly Safety meeting minutes from 1/97 through 8/99
MEMF Weekly Safety Checklist, updated 8/6/99

Interviews:

1. Environmental Protection Specialist
2. Material Hazard Accountant
3. MEMF Administration Analyst
4. Senior Engineer Tech
5. Manager of KT7 Technical Services
6. Project manager for TSD Communications
7. Manager of Cost & Budget Services
8. Accountant
9. Technical Project Specialist
10. Program Manager
11. Manager of Financial and Planning

Observations:

1. Mobile Electronics Facility
2. KT7 activities – Building 106, 125
3. CRADDOCK Facility
4. Armory

Discussion of Results

A Preliminary Hazard Process (PHA) is in place to assure that various types of hazards are systematically identified analyzed and documented. However, at the job activity level, a weakness in the overall FMT/NM hazard identification and analysis system was self identified.

ES&H risks and liabilities are formally and periodically assessed by various organizations and self assessed. The Kirtland Area Office (KAO)/ AL performed a Resource Conservation and Recovery Act (RCRA) inspection at FM&T/NM. Allied Signal Corporate performed an occupational health and medical audit. The Kirtland Air Force Base Weapons Safety Office conducted their annual inspection of FM&T/NM facilities for explosives safety. The AL transportation group and ES&H division have conducted explosive safety assessments. The ESAP is an ES&H self-assessment program for FM&T/NM. Zurich Associates is contracted with FM&T/NM to do various audits of the ES&H programs.

The impacts, risks, liabilities and potential liabilities of new projects, programs or activities are determined early in the planning process through FM&T/NM Project Management system. Process Description PD12.04.01.000, Project Management, defines five basic process elements: planing and negotiate, initiate project, implement project, monitor project, and retire project. During the 'plan and negotiate project" stage, the Program Office is responsible to asses customer requirements for compatibility with FM&T/NM's organizational capabilities and capacity. If the work requested is deemed appropriate for FM&T/NM, the project is assigned to a Project Manager. The Project Manager is responsible for development of a Work Breakdown Structure, creation of a Project Cost Estimate using Work Instruction WI12.04.01.00.0, and completing a Preliminary Hazard Analysis using PD11.07.01.01. A review of the various Program Management PD's, WI's, and associated Forms indicate FM&T has established a system for early identification of impacts, risks, and liabilities. However, a review of three work packages indicate personnel do not always follow the FM&T/NM system regarding program management documentation requirements nor document rational why specific documentation may not be required. For Job Number KTB 3325, Surge Protection, acceptance of work (Form NM0114, Contract Review Checklist) and cost estimate (Form NM 0115, FM&T/NM Project Cost Estimate Work Sheet) were not available. For Job Number KTB2, TSD Communication, a Preliminary Hazards Analysis was determined to be "not required" yet NM0003, Project Requirements Checklist, requires a PHA.

The results of risk analyses are effectively used to make decisions and to develop mitigating measures for ongoing or planned projects, programs or activities. Per Work Instruction WI11.07.01.01.01, How to Process a Preliminary Hazard Analysis, the originator of an activity is responsible for completing a PHA Determination Checklist and forward the determination to FM&T/NM ES&H. FM&T ES&H will review the determination, comment if necessary, and return the determination to the originator for action. The determination is the mechanism to identify what type of PHA Checklist is required (e.g., facilities-related, process-related, materials-related, equipment-related, new business, work for others, cash order, or procurement of office furniture). Upon completion of the required PHA Checklist(s), FM&T ES&H review and evaluate the checklist(s) for completeness. A review of completed PHA checklists indicates the FM&T ES&H organization is providing pertinent feedback to the originator of an activity.

Noteworthy Practice:

NMPM-1: The feedback provided by the FM&T ES&H organization to the originator of a work activity with regards to the PHA progress is noteworthy.

Risks to plant personnel, the public and the environment were discussed. FM&T/NM is taking steps to ensure risks are being reduced. Continuous improvement is accomplished through small FM&T teams that follow a nine-step process improvement and problem solving model. A review of FM&T/NM continuous improvement efforts since 1995 was performed. Since 1995, FM&T/NM chartered 86 teams to improve elements of business, process, and ES&H. Roughly 10 of these 86 are related to ES&H. Of note is the "Job Hazard Analysis Implementation" team. This team was chartered 6/8/99 with an objective to implement the JHA process at FM&T/NM. Since FM&T/KC is also working to strengthen their existing JHA program, it would be beneficial for FM&T/NM & FM&T/KC to share lessons learned.

A review of FM&T/NM ES&H staffing was performed. Three ES&H professionals, one administration person, and one manager provide ES&H oversight of FM&T/NM operations. Based on documents reviewed and interviews conducted, FM&T/NM ES&H personnel are competent commensurate with their responsibility.

The integrity and effectiveness of ES&H risk management and resource allocation are periodically reviewed through various assessments. Process Description PD11.07.01.03, management ES&H Audit, requires managers to conduct audits per Work Instruction WI11.07.01.03.01, Quarterly Shelf Life/hazardous material audit. Process Description PD.11.07.01.08, Environmental Self-Assessment Program (ESAP) defines the FM&T/NM system that associate use to conduct self-assessments using defined checklists to ensure compliance with ES&H requirements. Other mechanisms used by FM&T/NM to assess ES&H performance are Management Reviews, ES&H Meetings, and external audits. Corrective actions are tracked through FM&T/NM's Corrective Action Tracking System.

FM&T/NM budgeting, financial planning and resource allocation for ES&H programs was reviewed. Process Description PD.11.03.01.00, Plans and Budgets, define the process for developing and reviewing the response to a budget call. A review of budget allocation for FM&T/NM ES&H activities was performed. No concerns were noted.

Issues:

NMPM-2: A system by which Job Hazard Analysis (JHA) are appropriately applied to FM&T/NM operations is lacking.

NMPM-2.1: Adherence to PM documentation requirements, or documentation describing deviations from PM documentation requirements, is varied.

Conclusion

This performance objective and associated acceptance criteria have been met.

Submitted: *Original Signed By* Dan Pellegrino / Dean Treibel	Approved: *Original Signed By* Team Leader
	Date:

APPENDIX C – Review Plan

Integrated Safety Management System

Verification Review Plan

for

AlliedSignal

Federal Manufacturing & Technologies

Kansas City, Missouri and New Mexico

July 1999

Original Signed By
Dan Pellegrino, Team Leader

1.0 Background

On November 23, 1998, under Contract Number DE-AC04-76DP00613, AlliedSignal Federal Manufacturing & Technologies (FM&T) submitted their Integrated Safety Management System (ISMS) FY99 document to the AL manager for approval. One element of the ISMS FY99 document is the FY99 ES&H Management Plan (Plan).

The Plan is submitted annually by FM&T to the Department of Energy for Contracting Officer approval. The Plan incorporates the requirements of DOE P 450.4, Safety Management System Policy. Appendix B of the Plan entitled, Safety Management System Correlation Matrix, provides a crosswalk of the Safety Management System Components and the FM&T implementation of those components.

The ISMS FY99 document also contains three other major elements. They are the Operating Requirements, the FY99 Criteria, Review and Approach Documents (CRADS), and the FY99 Confirmation Cycle (e.g., approach for ISM Verification). The Operating Requirements describe the ES&H standards applicable to FM&T operations. The FY99 CRADS and FY99 Confirmation Cycle describe the methodology proposed to validate ISM implementation (e.g., ISM Verification) and validate operations in ES&H functional areas (e.g., DOE O 450.5) at FMT facilities in Kansas City and New Mexico.

On January 6, 1999, the AL Manager approved the FM&T ISMS FY99 Document.

2.0 Purpose

The ISMS Verification of AlliedSignal FM&T Kansas City and New Mexico facilities will verify that the ISMS fulfills the expectations of the Albuquerque Operations (AL) Manager, meets the requirements of the DEAR and the DOE Policy for Safety Management Systems, and that the management system is implemented.

3.0 Overall Approach

The verification will be a documented, management assessment conducted against the Criteria, Review and Approach Documents (CRADS) contained in Appendix A. The results of the assessment will be documented on the Assessment Form (Appendix B). An assessment form will be completed for each CRAD.

Team members were selected based on experience and expertise in the functional area assigned. Consideration was also given to experience and qualifications in conducting performance-based reviews. Team experience summaries are contained in Appendix C.

At the completion of this review, a formal report will be issued which will contain and executive summary and the completed Assessment Forms. The following is a description of the scope of that review.

4.0 Scope

The following CRADs will be reviewed. The first five (4.1-4.5) functional areas are applicable to

AlliedSignal, Kansas City. The last (4.6) functional area is applicable to the AlliedSignal New Mexico facilities.

4.1 Program Management

Three Program Management CRADS were identified in the FY99 ISM Document for AlliedSignal, Kansas City. All three will be reviewed. The following ISM functions and principles will be addressed:

Function(s**)**
Define the Scope of Work

Principle(s)
Balanced Priorities
Identification of Safety Standards and Requirements
Hazards Controls Being Tailored to Work Being Performed
Operations Authorization

4.2 Hazards Identification and Standard Selection

Six Hazard Identification and Standard Selection CRADS were identified in the FY99 ISM Document for AlliedSignal, Kansas City.. Three of these six will not be reviewed, as explained below.

HAZ.1: The Hazards Identification and Standards Selection (HAZ) CRAD, HAZ.1, is very narrowly scoped which fits into the ISM function of Analyze Hazards and the ISM principle of Identification of Safety Standards and Requirements. The CRAD HAZ.2 covers the same ISM function/principle more completely than HAZ.1, therefore, HAZ.2 was chosen for this review. Additionally, HAZ.2 evaluates the ISM function of Control Hazards.

HAZ.3: HAZ.3 has a narrow scope. HAZ.4 adequately addresses the HAZ.3 ISM function of Analyze Hazards and the ISM principle of Operations Authorizations. Additionally, HAZ.4 goes beyond to cover three additional ISM principles (Hazard Control Tailored to the Work Being Performed, Operations Authorizations and Management Commitment to Worker Safety and Worker Involvement) under the ISM function of Control Hazards.

HAZ.5: The CRAD HAZ.5 looks at the ISM function of Feedback and Improvement. The CRAD MG.5 also looks at the ISM function of Feedback and Improvement and covers more of the ISM Principles, therefore, MG.5 will be used in this review.

The Hazard Identification and Standard Selection CRADS to be reviewed (HAZ.2, HAZ.4, and HAZ.6) address the following ISM functions and principles:

Function(s**)**
Analyze the Hazards and Provide Feedback and Continuous Improvement
Principle(s)

Identification of Safety Standards and Requirements Hazard Controls Tailored to Work Being Performed

4.3 Management

Five Management CRADS were identified in the FY99 ISM Document for AlliedSignal, Kansas City.. Two of these five will not be reviewed, as explained below.

MG.2: The CRAD HAZ.6 adequately addresses the ISM functions/principles that are covered by MG.2. HAZ.6 has a much broader scope and is, therefore, more suited as a CRAD to be used for this review. HAZ.6 deals with the ISM functions of Analyze Hazards and Control Hazards, while MG.2 only deals with the ISM function of Analyze Hazards.

MG.3: The MG.3 CRAD is covered by the same ISM functions/principles as HAZ.4 and the Operations and Implementation (OI) CRAD OI.2. Additionally, HAZ.4 and OI.2 cover a larger amount of the ISM functions/principles in the crosswalk matrix.

The Management CRADS to be reviewed (MGT1, MGT4, and MGT5) address the following ISM functions and principles:

Function(s)
Define the Scope of Work
Feedback and Continuous Improvement

Principle(s)
Line Management Responsibility Clear Roles and Responsibilities
Competence Commensurate Operations Authorization

4.4 Operations and Implementation

Five Operations and Implementation CRADS were identified in the FY99 ISMS document for AlliedSignal, Kansas City. Two of these five will not be reviewed, as explained below.

OI.3: OI.3 has a narrow scope and only covers one area in the crosswalk matrix. OI.2 covers the scope of OI-3 (ISM principle, Hazard Control Tailored to the Work Being Performed) plus the ISM principles of Line Management Responsible for Safety, Clear Roles and Responsibilities, and Management Commitment to Worker Safety and Worker Involvement under the ISM function of Perform Work.

OI.4: MG.5 covers the ISM function/principle, Clear Roles and Responsibilities'/'Feedback and Improvement of OI.4 plus four other principles under the ISM function Feedback and Improvement.

The Operation and Implementation CRADS to be reviewed (OI.1 and OI.2) address the following ISM functions and principles:

Function(s)
Conduct Work
Feedback and Continuous Improvement

Principle(s)
Line Management Responsibility
Clear Roles and Responsibility
Hazard Controls Tailored to Work Being Performed
Operations Authorization

4.5 DOE Acquisition Regulations

No specific DEAR CRADS were identified in the FY99 ISMS document. A CRAD was developed to assure the ISMS documentation is consistent with DOE P 450.5, the DEAR, and HCA guidance. This CRAD addresses Core Expectation CE-I-1, as defined in the ISMS Verification Team Leader's Handbook.

4.6 Program Management (Specific to NM Facilities)

Four New Mexico Performance Measures CRADS were identified in the FY99 ISM Document for AlliedSignal, New Mexico facilities. Two of these four will not be reviewed, as explained below:

NMPM-3: This CRAD looks at ES&H Self Assessment. The CRAD NMPM-1, Safety Management System and Accountability also include elements of self assessment, as well as performance monitoring. Therefore, the intent of CRAD NMPM-3 will be covered by NMPM-1.

NMPM-4: This CRAD looks at ES&H Training and Qualification. The CRAD NMPM-1, Safety Management System and Accountability also include elements of ES&H training and qualification. Therefore, the intent of CRAD NMPM-4 will be covered by NMPM-1.

The New Mexico Performance Measures CRADS to be reviewed (NMPM-1, Safety Management System Accountability, and NMPM-2, Risk Management and Resource Allocation) address the following ISM functions and principles:

Function(s)
Define Work
Analyze Hazards
Implement Controls
Perform Work
Feedback & Improvement

Principle(s)
Line Management Responsibility
Roles & Responsibilities
Balanced Priorities

Identification of Safety Standards
Hazard Controls Tailored to Work Being Performed

Appendix A
Criteria, Review, and Approach Documents

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Program Management	**PM-1**

Objective

Contractor procedures and practices ensure that missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated.

Acceptance Criteria

1. Contractor procedures and practices translate mission expectations received from DOE into tasks that permit identification of resource requirements, relative prioritization, and performance measures.

2. Contractor procedures and practices provide for DOE approval of the contractor's proposed tasks and prioritization of the mission expectations transmitted to the contractor.

3. Contractor procedures and practices provide for change control of the approved task identification, prioritization, and funding.

4. Contractor procedures and practices provide for flowdown of DEAR 970.5204-2, "Integration of Environment, Safety and Health into Work Planning and Execution," requirements into subcontracts involving complex or hazardous work.

Review Approach

Record Review:
Review contractor procedures for identification of mission requirements and balancing of resource allocations. Review the contractor's change control procedures. Review contractor procedures requiring safety requirements flowdown into subcontracts.

The following general documents will be reviewed:

- Contract No. DE-AC04-76DP00613
- Business Model
- ES&H Management Plan
- Letter from Twinning to Clegg, Subject: Contract
- Number DE-AC04-76DP00613 Integrated Safety
- Management FY98, dated Feb. 24, 1998
- Work Authorization Directives
- DOE Strategic Plan
- Operating requirements Database

The following International Organization for Standardization/Voluntary Protection Program/Process Description documents will be reviewed:

ISO #	Title
4.3.2	Legal and Other Requirements
4.3.3	Objectives and Targets
4.4.1	Structure and Responsibility

VPP #	Title
1.a	Commitment to Safety and Health Protection

PD #	Title
01.06.07.0	External Requirements Management
01.06.12.0	Resource Management
22.02.02.0	Fire Protection Program Requirements Identification Environmental Compliance

Interviews:
Interview contractor personnel responsible for management of the Contract, ES&H Management Plan, and the Business Model process.

Interview ES&H management to determine processes for integration of environment, safety, and health into mission tasks.

Interview contractor personnel for management of the budget process and prioritization of objectives and targets.

Observations:
When feasible, observe representative examples and results of the process described in the procedures to verify their effective execution.

1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies
Assessment Form

Subteam Functional Area:	**Objective Number:**
Program Management	**PM-2**

Objective

Contractor ISMS procedures and practices for Program Management ensure balanced priorities. Resources are allocated to address safety, programmatic, and operational considerations. Protecting the public, workers, and environment is a priority whenever activities are planned and performed.

Acceptance Criteria

1. The prioritization and allocation process clearly addresses both ES&H and programmatic needs. The process involves line management input and approval of the results.

2. Priorities include commitments and agreements to DOE as well as stakeholders.

3. Contractor ISM procedures and practices provide adequate resources to adequately analyze hazards associated with the work being planned.

4. Contractor ISM procedures and practices for resource allocations include provisions for implementation of hazard controls for tasks being funded.

5. Resource allocations reflect the tailored hazard controls.

Review Approach

Record Review:
Review contractor procedures for identification of mission requirements and balancing of resource allocations. Review the contractor's change control procedures.

The following general documents will be reviewed:

- Budget Prioritization
- Workload Resource Planning System
- Work Authorization Directives
- Operating Requirements Database

The following International Organization for Standardization/Voluntary Protection Program/Process Description documents will be reviewed:

ISO #	**Title**
4.2.0	Environmental Policy

4.3.2	Legal and Other Requirements
4.3.4	Environmental Management Programs
4.4.1	Structure and Responsibility
4.5.1	Monitoring and Measurement

VPP #	**Title**
1.a	Commitment to Safety and Health Protection
1.b	Written Safety and Health Program

PD #	**Title**
01.06.07.0	External Requirements Management
01.06.12.0	Resource Management
22.01.01.0	Risk Management Pre-planning Process
22.02.02.1	Environmental Compliance
23.01.01.0	Environmental Restoration
23.02.01.0	Pollution Prevention
23.02.02.0	Clean Air Act & Local Air Regulation Compliance
23.02.03.0	Wastewater Discharge
23.02.04.0	Waste Management
23.02.05.0	Pesticides and Toxic Substances Control

Interviews:
Interview ES&H management to determine processes for integration of safety into mission tasks.

Interview contractor personnel for management of the budget process.

Observations:
When feasible, observe contractor budgetary discussions and their conclusions to verify practical application of the procedures.

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Subteam Functional Area:	**Objective Number:**
Program Management	**PM-3**

Objective

The contractor procedures and practices ensure that personnel who define the scope of work and allocate resources have competence that is commensurate with the assigned responsibilities.

Acceptance Criteria

1. Contractor ISM procedures and practices ensure that the personnel, including line management, who define, prioritize, and approve the scope of work and allocate resources have competence that is commensurate with the assigned responsibilities.

2. Personnel who actually participate in definition of the scope of work and allocate resources demonstrate competence to prioritize and approve work with tailored hazard controls.

Review Approach

Record Review:
Review contractor organizational documentation to determine the personnel positions with responsibility associated with this objective. Review the position description for those positions.
Review Training and Qualification Database and Job Classification Description material, which supports gaining or verifying competence to fill the positions.

The following International Organization for Standardization/Voluntary Protection Program/Process Description documents will be reviewed:

ISO #	**Title**
4.4.2	Training, Awareness and Competence

VPP #	**Title**
1.b	Written Safety and Health Program
4.a	Competent Professionals
6	Safety and Health Training

PD #	**Title**
01.01.03.0	Qualification/Training
01.01.03.0	Mandated Training
01.01.03.0	Development Training

Interviews
*I*nterview selected individuals and managers whose responsibilities fall within this objective.

Observations:
Observe the contractor and verify that the competence of personnel is commensurate with the assigned responsibilities.

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Subteam Functional Area:	**Objective Number:**
Hazard Identification	**HAZ-1**

Objective

Contractor procedures and practices ensure that before operations are commenced or work is performed, (a) hazard controls are identified, tailored, agreed upon, and implemented, and (b) safety standards and requirements are identified, agreed upon, and implemented, such that there is adequate assurance that the public, workers, and environment are protected from adverse impacts from the hazards.

Acceptance Criteria

1. Contractor ISM procedures and practices utilize acceptable standards and methodologies to identify adequate hazard controls that protect the public, worker and environment.

2. Contractor ISM procedures and practices ensure controls are tailored to the hazards associated with the work or operations to be authorized.

3. Contractor ISM procedures and practices ensure the identified controls, standards, and requirements are agreed upon and implemented prior to the commencement of the operations or work being authorized.

4. Contractor ISM procedures specify an appropriate review and approval process for the hazard controls and safety standards and requirements and are effectively utilized.

5. Contractor ISM procedures specify the conditions and requirements to be satisfied for operations to be initiated and conducted and are effectively utilized.

Review Approach

Record Review:
Review contractor procedures and verify that they utilize acceptable standards to identify adequate controls, and that the controls are tailored to the work being performed and the associated hazards. Review the threshold authorization basis and Site Safety Assessment documentation to verify that procedures and practices resulted in controls being identified that will protect the safety of the public, workers, and the environment. Review procedures to verify that hazard controls and safety standards are properly chosen and implemented prior to work being authorized. (This may be reviewed in conjunction with objective Hazard.3.)

Review contractor Process Descriptions or other requirement documents to ensure that they provide adequate procedures and requirements to be followed to authorize work or operations at the KCP.

The following International Organization for Standardization/Voluntary Protection Program/Process Descriptions will be reviewed:

ISO #	**Title**
4.3.4	Environmental Management Programs
4.4.2	Training, Awareness and Competence
4.4.6	Operational Control
4.4.7	Emergency Preparedness and Response

VPP #	**Title**
1.b	Written Safety and Health Program
4.b	Controlling hazards
4.c	Administrative Controls
4.e	Preventive/Predictive Maintenance

PD #	**Title**
01.06.10.0	Emergency Management Process
21.01.04.0	Chemical Hazard Evaluation
22.01.01.0	Risk Management Pre-planning Process
22.02.02.0	Fire Protection Program Requirements Identification
23.01.01.0	Environmental Restoration
23.02.01.0	Pollution Prevention
23.02.02.0	Clean Air Act & Local Air Regulation Compliance
23.02.03.0	Wastewater Discharge
23.02.04.0	Waste Management
23.02.05.0	Pesticides and Toxic Substances Control

Interviews:
Interview contractor personnel with direct or managerial responsibility for development, tailoring and implementation of hazard controls.

Observations
Observe the contractor and verify that implemented safety standards and requirements and hazard controls ensure protection of workers, the public, and the environment.

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Assessment Form

Subteam Functional Area:	**Objective Number:**
Hazard Identification	**HAZ-2**

Objective

Contractor procedures and practices ensure those contractor personnel responsible for analyzing the hazards and develop, review, or implementing the controls, have competence that is commensurate with their responsibilities. DOE roles and responsibilities are clearly defined to assure appropriate oversight and review of the analysis of hazards and the identification of controls. Personnel shall possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities.

Acceptance Criteria

1. Contractor ISM procedures require that personnel responsible for analyzing hazards and identification of adequate controls have competence which is commensurate with their responsibilities.

2. Personnel who analyze hazards and identify adequate controls demonstrate competence that is commensurate with their responsibility.

3. Contractor ISM procedures have clearly defined roles and responsibilities for personnel assigned to oversee, review, and approve the analysis of hazards associated with approved processes or facilities.

4. Contractor ISM procedures have clearly defined roles and responsibilities for personnel assigned to review and approve safety authorization controls.

Review Approach

Record Review:
Review contractor organization documentation to identify personnel, including all levels of management to whom this objective applies. Review the position descriptions for those personnel to determine the required competencies. Review training, qualification and competency procedures. Review training and qualification records for those personnel identified above to determine how the required competency has been gained, retained, and validated.

Review the contractor implementing procedures that identify the roles and responsibilities for appropriate oversight and review of the analysis of hazards and the identification of controls. Verify that the definition is adequate to assure safety.

Verify that line management and staff personnel roles, responsibilities, and authorities are appropriate to assure safety through appropriate oversight and review of the analysis of hazards and the identification of controls. Review selected qualification program records.
Review the following elements of the ES&H Management Plan and selected Process Descriptions:

The following Industry Standard/Voluntary Protection Program/Process Description documents will be reviewed:

ISO #	**Title**
4.3.4	Environmental Management Programs
4.4.1	Structure and Responsibility
4.4.2	Training, Awareness and Competence
4.4.3	Communication
4.5.4	Environmental Management System Audit

VPP #	**Title**
1.a	Commitment to Safety and Health Protection
4.a	Competent Professionals
5	Safety and Health Training

PD #	**Title**
01.01.03.0	Qualification/Training
01.01.03.0	Mandated Training
01.01.03.0	Development Training
21.01.01.0	Controlling Explosives and Production Batteries
21.01.01.0	Combustible and Flammable Materials
21.01.01.0	Chemical Carcinogen Control Program
21.01.01.0	Hazard Communication
21.01.02.0	Hoisting and Rigging
21.01.02.0	Vehicles
21.01.02.0	Equipment Safety Controls
21.01.02.1	Laser Safety
21.01.02.1	Electrical Safety
21.01.03.0	Personal Protective Equipment
21.01.03.0	Fall Protection
21.01.03.0	Noise Control & Hearing Conservation
21.01.03.0	Ergonomics
21.01.03.1	Confined Spaces
21.02.01.0	Summary of Radiation Work Authorizations
22.01.01.0	Risk Management Pre-planning Process
22.02.02.0	Fire Protection Program Requirements Identification
22.02.02.0	Hazard Abatement
22.02.02.0	Accident/Incident Investigation and Reporting
22.02.02.0	Risk Management Maintenance Process
22.02.02.1	Environmental Compliance
22.03.01.0	ES&H Process Identification and Control
22.03.02.0	ES&H Command Media
23.01.01.0	Environmental Restoration

23.02.01.0	Pollution Prevention
23.02.02.0	Clean Air Act & Local Air Regulation Compliance
23.02.03.0	Wastewater Discharge
23.02.04.0	Waste Management
23.02.05.0	Pesticides and Toxic Substances Control

Interviews:
Interview selected contractor individuals from those identified above to verify their understanding of the required competencies and the degree to which they demonstrate those competencies.

Interview contractor personnel identified in the record review above to determine their understanding of the assigned responsibilities and the adequacy of this understanding to assure safety.

Observations:
Observe the contractor and verify that the competence of personnel is commensurate with the assigned responsibilities.

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Assessment Form

Subteam Functional Area:	**Objective Number:**
Program Management	**MG-1**

Objective

Contractor roles and responsibilities are clearly defined to ensure satisfactory safety, accountability, and authority to define the scope of work. Line management is directly responsible for safety.

Acceptance Criteria

1. Contractor ISM defines the roles and responsibilities of line management to ensure responsibility for safety in definition of the scope of work.

2. Contractor ISM defines clear roles and responsibilities of all personnel associated with definition of the scope of work to ensure that safety is maintained at all levels.

Review Approach

Record Review:
Review applicable organizational documentation, which defines personnel with responsibility for definition of the scope of work. Review position descriptions and other documentation which describes the roles and responsibilities related to ensuring safety is maintained when developing the definition of the scope of work. The review should consider personnel in both line management and staff positions. Line management must retain responsibility for safety.
Review the following elements of the ES&H Management Plan, Job Classification Descriptions, Quality Manual 4.1.2.1 and Selected Process Descriptions.

The following Industry Standard/Voluntary Protection Program/Process Description documents will be reviewed:

ISO #	**Title**
4.3.3	Objectives and Targets
4.4.1	Structure and Responsibility

VPP #	**Title**
1.b	Written Safety and Health Program
4.a	Competent Professionals

PD #	**Title**
22.03.02.0	ES&H Command Media

Interviews:
Interview selected personnel at all levels of management that are identified by the record review above. Verify their understanding and commitment to insuring safety during the processes of defining the scope of work.

Observations:
Observe the contractor and verify that roles and responsibilities for safety are effectively defined and executed.

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Assessment Form

Subteam Functional Area:	**Objective Number:**
Management	**MG-1**

Objective

Contractor line management responsibility for safety includes responsibility to ensure that work is performed within controls.

Acceptance Criteria

1. Contractor ISM assigns responsibility to line management to ensure that work is performed within controls.

2. Contractor ISM procedures and practices hold line management responsible for ensuring that controls to ensure work is accomplished safely are verified and maintained as required by the approved safety authorization basis.

3. Contractor procedures ensure that personnel who supervise or actually perform work within controls have competence commensurate with the responsibilities to which they are assigned.

Review Approach

Record Review:
Review applicable organization documents to determine roles and responsibilities as well as competency requirements for safely conducting work within controls as discussed in the above criteria. Review the Job Classification Description and Qualifications Training Database for insuring that personnel who perform or supervise work within controls have competency commensurate with the responsibilities assigned.

Review the following elements of the Quality Manual 4.1.2.1, International Organization for Standardization Documents, Voluntary Protection Program Documents, and Selected Process Descriptions.

The following International Organization for Standardization/Voluntary Protection Program/Process Description documents will be reviewed:

ISO #	**Title**
4.4.6	Operational Control

VPP #	**Title**
1.a	Commitment to Safety and Health Protection
1.b	Written Safety and Health Program
4.a	Competent Professionals

5 Safety and Health Training

PD #	Title
01.01.03.0	Qualification/Training
01.05.03.0	Corrective and Preventive Action Process
01.06.09.0	Internal Quality Audit
02.02.03.0	Generate Factory Instructions, Tooling, and Equipment
21.01.02.0	Ventilation
21.01.02.1	Pressure Safety
22.01.01.0	Risk Management Pre-planning Process
22.02.02.1	Environmental Compliance
23.01.01.0	Environmental Restoration
23.02.01.0	Pollution Prevention
23.02.02.0	Clean Air Act & Local Air Regulation Compliance
23.02.03.0	Wastewater Discharge
23.02.04.0	Waste Management
23.02.05.1	Pesticides and Toxic Substances Control

Interviews:
Interview selected managers at all levels to determine their understanding and commitment to conducting work safely in accordance within approved ES&H threshold safety authorization limits. Assess the competency and the process for maintaining the competency.

Observations:
Observe the contractor and verify that work is performed within controls.

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Assessment Form

Subteam Functional Area:	**Objective Number:**
Management	**MG-2**

Objective

Feedback information on the effectiveness of the ISMS is gathered, opportunities for improvement are identified and implemented, line and independent oversight is conducted, and, if necessary, regulatory enforcement actions occur.

Acceptance Criteria

1. Contractor ISM procedures and practices assign line management responsibility for safety including responsibility to provide feedback and continuous improvement.

2. Contractor ISM procedures and practices describe clear roles and responsibilities to provide feedback and continuous improvement.

3. Contractor ISM procedures and practices ensure that competence is commensurate with the responsibilities to provide feedback and continuous improvement.

4. Contractor ISM procedures and practices ensure that priorities are balanced to ensure feedback is provided and continuous improvement results.

5. Contractor ISM procedures and practices require line and independent oversight or assessment activities at all levels.

6. Contractor ISM procedures and practices ensure oversight or assessment results are managed and that lessons learned are applied throughout the site; that issues are identified and managed to resolution; that fundamental causes are determined and effective corrective action plans are developed and implemented.

7. Contractor ISM procedures and practices ensure that performance measures or indicators and performance objectives are developed in coordination with DOE as required. Further, contractor ISM procedures and practices require effective management and use of performance measures and objectives.

8. Contractor ISM procedures and practices provide for regulatory compliance and enforcement as required by rules, laws, and permits such as NEPA, RCRA, CERCLA, etc.

Review Approach

Record Review:

Review ES&H Management Plan Section 3.2, 3.4, 3.5, and 3.15 to determine the procedures, processes and requirements, which meet this objective. Assessments include regulatory compliance in accordance with laws, rules, and permits. Review selected assessment results. Track issues identified during assessments to completion. Assess the effectiveness of the assessment and feedback process to achieve process improvement.

Review the " Management Review" process for adequacy, effectiveness, and support for process improvement.

Interviews:

Observations:

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Assessment Form

Subteam Functional Area:	**Objective Number:**
Operations and Implementation	**OI-1**

Objective

Contractor procedures and practices require work to be performed in accordance with an approved and agreed upon operations authorization.

Acceptance Criteria

1. Contractor ISM procedures and practices require that operational implementation procedures reflect the requirements of the approved operations authorization.

2. Contractor ISM procedures and practices require that work be accomplished in accordance with procedures, which reflect the controls defined in the approved operations authorization.

3. Contractor ISM procedures and practices verify, through assessment and review, that work is performed in accordance with approved operations authorization.

4. Contractor ISM procedures and practices verify that readiness to conduct work within the controls of the approved operations authorization has been achieved prior to authorizing work to start.

Review Approach

Record Review:
(Note that the SME evaluations will comprise a significant portion of the reviews, which will verify the above criteria. The results of the SME evaluation, which are relevant to this objective, will be utilized as appropriate to determine whether the criteria and the objective have been met.)

Review ES&H Management Plan Sections 1.0, 3.4, and 3.15 to determine the acceptability to meeting the criteria. Review procedures for linking operating requirements to operational procedures. Review procedures and programs for routine assessment, both self-assessment by line management and independent assessment by ES&H organizations.

Review the Operating Requirements Database, the Site Safety Assessment and the following:

The following International Organization for Standardization/Voluntary Protection Program/Process Description documents will be reviewed:

ISO #	**Title**
4.3.2	Legal and Other Requirements
4.3.4	Environmental Management Programs
4.4.6	Operational Control

4.5.1 Monitoring and Measurement

VPP #	Title
1.a	Commitment to Safety and Health Protection
1.b	Written Safety and Health Program
3.a	Facilities are analyzed before they are used
3.b	Comprehensive safety and health surveys
3.c	Routine hazard assessments that follow written procedures result in written
3.e	Employee Concerns
3.f	Accident and Investigation System

PD #	Title
01.06.09.0	Internal Quality Audit
21.01.04.0	Exposure Assessment
22.01.01.0	Risk Management Pre-planning Process
22.02.01.0	Annual ES&H Inspections
22.02.01.0	Management Observing & Promoting Safety
22.02.02.0	Environmental Self Assessment Program (ESAP)
22.02.02.0	Job Hazard Analysis
23.01.01.0	Environmental Restoration
23.02.01.0	Pollution Prevention
23.02.03.0	Wastewater Discharge
23.02.04.0	Waste Management
23.02.05.0	Pesticides and Toxic Substances Control

Interviews:
Interview line and support personnel responsible for implementation of requirements to control work

Observations:
Observe the contractor and verify that work is performed in accordance with a defined operations authorization.

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Assessment Form

Subteam Functional Area:	**Objective Number:**
Operations and Implementation	**OI-2**

Objective

The contractor has established clear roles and responsibilities to ensure that work is performed within controls.

Acceptance Criteria

1. Contractor ISM procedures and practices clearly identify roles and responsibilities for line management in a manner to ensure work is planned, approved, and conducted safely. Line management is responsible for safety.

2. Contractor ISM procedures and practices ensure that support organizations with primary capability to develop and implement hazard controls have clearly defined roles and responsibilities.

Review Approach

Record Review:
Review ES&H Management Plan Sections 3.2, 3.6, and 3.10 to determine required roles and responsibilities. Review Job Classification Descriptions for selected managers and associates in both line and support divisions.

Review Quality Manual 4.1.2.1 and the following documents:

ISO #	**Title**
4.3.4	Environmental Management Programs
4.4.1	Structure and Responsibility
4.4.3	Training, Awareness and Competence

VPP #	**Title**
1.a	Commitment to Safety and Health Protection
1.b	Written Safety and Health Program
3.a	Facilities are analyzed before they are used
3.b	Comprehensive safety and health surveys
3.c	Routine hazard assessments that follow written procedures result in written
3.d	Routine examination and analysis of hazards associated with individual

PD #	**Title**
21.01.02.0	Lockout/Tagout (LOTO)
21.01.02.0	Machine Guarding and Tagging
21.01.02.0	Hoisting and Rigging

21.01.04.0	Exposure Assessment
22.01.01.0	Risk Management Pre-planning Process
22.02.02.0	Fire Protection Program Requirements Identification
22.02.02.0	Job Hazard Analysis
23.01.01.0	Environmental Restoration
23.02.01.0	Pollution Prevention
23.02.02.0	Clean Air Act & Local Air Regulation Compliance
23.02.03.0	Wastewater Discharge
23.02.04.0	Waste Management
23.02.05.0	Pesticides and Toxic Substances Control

Interviews:
Interview selected managers and associates at each level of responsibility. Utilize information gathered by SMEs as well as by direct interviews to support the determination of meeting the criteria.

Observations:
Observe the contractor and verify that established roles and responsibilities ensure that work is performed within controls.

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Assessment Form

Subteam Functional Area:	**Objective Number:**
DOE Acquisition Regulation	**DEAR-1**

Objective

The ISMS Description is consistent and responsive to the DOE Policy 450.4, the DEAR, and the direction to the contractor from the Contracting authority. FM&T policies and procedures insure that the ISMS description is maintained, implemented, and that implementing mechanisms result in integrated safety management.

Acceptance Criteria

1. *ISMS Description Consistency* - The FM&T ISM System description is consistent with the DOE Policy, the DEAR Requirements for Integrated Safety Management, and the Contracting Officers' direction to FM&T.

2. *ISMS Implementation* –FM&T has mechanisms in place to direct, monitor, and verify the implementation of the ISMS as described in the system description.

3. *ISMS Description Maintenance* – FM&T has assigned responsibilities and established the mechanisms to insure that the ISMS description is maintained current and that the annual update information is prepared and submitted.

Review Approach

Record Review
Review FY99 ISMS document and Appendix B of the ES&H Management Plan.

Interviews:
Interview personnel responsible for maintenance of the FY99 ISMS document. Interview personnel responsible for development of performance measures.

Criteria, Review, and Approach Documents
1999 ISMS Verification
AlliedSignal Federal Manufacturing & Technologies, New Mexico
Assessment Form

Subteam Functional Area:	**Objective Number:**
Management	**NMPM-1**

Objective

A comprehensive Safety Management System (including environment, safety and health) systematically integrates ES&H into management and work practices at all levels, synergistically combines individual ES&H management systems and resources, and holds line and program management accountable for performance.

Acceptance Criteria

1. Using a graded approach, a comprehensive Safety Management System is maintained for contractor managed facilities.

2. The basis for continuing operations at contractor managed facilities is established through the site contract and is further implemented by the requirements and commitments contained in the ES&H Management Plan, the contractor Quality System, the standards included in the Operating Requirements Database/Standards List, the Site Safety Assessment, periodic Hazard Assessments, and pertinent National Environmental Policy Act (NEPA) documentation.

3. A complete and updated listing of applicable laws, regulatory requirements, agreements, permits, and Department of Energy (DOE) Directives is maintained and integrated into a system which ties them to work instructions and/or process descriptions.

4. A formal controlled process exists and is utilized for creating, reviewing, updating, approving and distributing ES&H procedures, work instructions, and process descriptions.

5. Any adopted ES&H management systems are efficiently and effectively integrated with previously established quality management systems.

6. Management commitment to ES&H at all levels is clearly stated, demonstrated by policies, participation and actions, and reinforced by a culture which seeks continuous ES&H improvement.

7. The consistency and formality of operations at contractor managed facilities are continuously improved, and appropriately reflect the degree of risk and general industry practice.

8. Facility inspections, reviews, compliance checks, monitoring programs, etc. are effectively utilized to ensure that industrial, maintenance and construction operations, ES&H practices and housekeeping meet defined management standards. Problems are documented and assessed and corrective actions are taken to improve performance.

9. Appropriate and required documentation concerning past, present and expected ES&H performance is maintained.

Review Approach

Record Review:
Review appropriate documentation and reports, and determine whether:

1. A comprehensive Safety Management System is established.

2. Up to date written procedures, work instructions and process descriptions are maintained to provide direction for operating the facility within its designed parameters.

3. The listing of applicable laws, regulatory requirements, agreements, permits, and DOE Directives is maintained, current and accurate.

4. The organizational design of ES&H programs and the associated roles and responsibilities clearly support DOE ES&H goals and objectives and enhance facility ES&H performance.

5. Job descriptions, performance standards and performance appraisals appropriately reflect the roles, responsibilities and actual performance of ES&H technical and contractor management personnel.

6. The observation, review and use of ES&H records, statistics, tracking mechanisms, report submissions, logs, inventory and release reports, etc., and the demonstrated response to DOE or regulatory agency requests for information indicates that appropriate and required ES&H documentation is being maintained.

Interviews:

Observations:

1. The Safety Management System at contractor managed facilities is designed, documented, and operated in a manner which efficiently and effectively facilitates the accomplishment of assigned missions while protecting workers, the public and the environment.

2. Operations and activities at contractor managed facilities are conducted in accordance with the basis of continuing operations.

3. The notification, response and documentation of significant events noncompliance's, material releases, incidents, accidents and/or emergencies, etc., are completed in accordance with established policies, procedures, work instructions and process descriptions.

4. The results of ES&H and other inspections, reviews, compliance checks, monitoring programs, etc., and the lessons learned from other facilities through benchmarking or the review of various reports and documents, clearly lead to improvements in the efficiency and effectiveness of contractor managed ES&H programs.

5. ES&H goals, objectives and strategies are seamlessly integrated into the day-to-day management and operations of contractor managed facilities and are apparent in published policies, work instructions and process descriptions as well as in the observed conduct of facility personnel.

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Assessment Form

Subteam Functional Area:	Objective Number:
Management	**NMPM-2**

Objective

The contractor ensures that for its programs and operations, ES&H risks are identified and comprehensively analyzed; that Reliability and Maintainability (RAM) issues are considered early in the design phases of projects, and that risk reduction resources are allocated appropriately.

Acceptance Criteria

1. ES&H risks and liabilities are formally and periodically assessed.

2. The impacts, risks, liabilities and potential liabilities of new projects, programs or activities are determined early in the planning process.

3. The results of both formal and informal risk analyses are applied in accordance with set risk criteria and effectively used to make decisions and to develop mitigating measures for ongoing or planned projects, programs or activities.

4. Risks to plant personnel, the public and the environment are continually reduced.

5. Contractor ES&H staffing is appropriate to the degree of risk, is sufficient to achieve DOE ES&H goals and objectives, and is consciously compared to the levels maintained by similar private sector companies.

6. The integrity and effectiveness of ES&H risk management and resource allocation are periodically reviewed and revisions are made when warranted.

7. Budgeting, financial planning and resource allocation for ES&H programs is comparable in priority and formality to the processes used for facility production activities and other organization functions.

Review Approach

Record Review:
Review appropriate documentation and reports, and determine whether:

1. A Preliminary Hazard Process (PHA) process is in place that assures that hazards are systematically identified analyzed and documented.

2. A formal Hazard Assessment is developed, and reviewed and updated annually for each major site.

3. Strategic and organizational planning and budgeting documents, proposed capital projects, operational planning processes, etc., appropriately reflect the early use of risk management techniques.

4. The timeliness and quality of National Environmental Policy Act (NEPA) documentation indicates early and appropriate inclusion of ES&H considerations into the planning process.

5. The number and characteristics of citations and observations of unsafe, unhealthy or environmentally sensitive acts and conditions identified during tours, inspections, audits, reviews, etc., by contractor, DOE, regulatory agencies or other third party organizations indicate that risks and liabilities are being effectively and efficiently reduced.

Observations:

1. The frequency, appropriateness, results, and management responses to formal and informal risk analysis efforts demonstrate the effective and efficient use of risk management methodologies in the operation of existing facilities and in the development and selection of alternative courses of action.

2. The alternative presented to DOE and the supporting advantages and disadvantages demonstrate that the contractor maintains appropriate quality in their formal and informal hazard analyses and emergency planning.

3. The degree of aggregate risks and liabilities associate with contractor managed operations and facilities is appropriately reflect in the ES&H Budget Formulation Plan and other financial planning process, and in the design and execution of ES&H programs.

4. The number, quality and nature of ES&H staffing can be clearly traced to conscious decisions that involve a dynamic balancing of ES&H risk, customer requirements and desires, and available resources.

Appendix B

Assessment Form – Example Format

Assessment Form

Subteam Functional Area:	**Objective Number:**
Program Management	**PM-# - sample**

Objective

Contractor procedures and practices ensure that missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated.

Acceptance Criteria

List each acceptance criteria associated with the performance objective.

Review Approach

Record Review:

List all documentation reviewed

Interviews:

List all personnel interviewed by title – not name

Observations:

List all processes observed

Discussion of Results

Discuss each acceptance criteria

Noteworthy Practice:

Conclusion

Statement on whether or not performance objective and acceptance criteria were met.

Submitted: _____ Team Member	Approved: _____ Team Leader
	Date:

Appendix C

Team Experience Summaries

Dan Pellegrino
Dan Pellegrino has a Bachelor of Science degree in Electrical Engineering. He has 18 years of experience in program management, operations, and quality assurance. Dan has been closely involved with the Departments implementation of Integrated Safety Management. He is a Certified ISMS Verification Team Leader, and was the Deputy Team Leader for PX and SNL ISMS Verifications. Dan's operational experience include project team membership for restart of the Dynamic Balancer at PX. Other recent duties include: AL representative on the Pantex Integrated Safety Management (ISM) Facilitation Team responsible for facilitation of Integrated Safety Management at PX; Conduct of Operations subject matter expert Team member for the Annual Core Research Reactor (ACRR) Operational Readiness Review (ORR); Primary AL liaison for Defense Nuclear Facility Safety Board activities; AL Price Anderson Coordinator;
Member of Type A investigation team for the fatal shooting incident at LANL. From May 1981 to June 1991, Dan was involved in DOE/AL's weapon quality program. He provided oversight of weapon component quality and final assembly for products produced at DOE/AL production facilities. These sites include the Kansas City Plant, the Mound Plant, the Pantex Facility, and the Rocky Flats Plant. He provided direction, guidance, and evaluation to assure product quality met specifications during development, preproduction, and production. He also performed weapon quality assurance surveys, analyzed and approved DOE Area Office survey schedules, and reviewed quality data to detect trends.

Jody Eggleston
Jody Eggleston has a Bachelor of Science degree in Mechanical Engineering and a Masters in Business Administration. Has 7 years experience in test and evaluation of missiles and missile components.

Participated in the 10 CFR 830.120 review for LANL.
Participated in a Quality Assurance Appraisal per DOE Order 5700.6C, "Quality Assurance," at the TSD Vehicle Maintenance Facility in Oak Ridge.

Participated in the development of the AL Technical Self-Assessment Program.

Participated in the Pilot Baseline Validation Assessment of Order Compliance Self-Assessments at the Pantex Plant.

Alex Griego
Mr. Griego has a Bachelor of Science Degree in Civil Engineering. He has 31 years experience involving planning, design, occupational safety, environmental protection and project management. This experience was gained with various Federal agencies, e.g. Corps of Engineers, Forest Service, Department of Defense and Department of Energy. Since joining the Department of Energy in 1980, his career has focused on environmental protection, facility safety and occupational safety at a broad range of nuclear and non-nuclear sites. He as served as a Branch Leader and Team Leader conducting oversight assessments at various AL facilities including joint efforts with DOE Headquarters organizations. He has reviewed/commented on numerous Safety Analysis Reports and Health and Safety Plans.

Frank Sprague
Mr. Sprague has 20 years of technical experience in health physics, emergency planning, reactor operations, and environmental engineering. This experience includes: health and safety oversight; regulatory compliance oversight; environmental protection oversight; safety analysis evaluation; applied operational and environmental health physics; accident investigation; program management; and emergency planning. This experience was gained through employment in the military, state government, private industry, and DOE. Mr. Sprague's expertise is in operational and environmental health physics and non-radiological environmental protection, emergency planning and response, hazardous material transport, and process safety management. In addition to radiological and environmental related DOE Orders, consensus standards, technical standards, and the DOE Radiological Control Manual, Mr. Sprague has a working knowledge of 10 CFR Parts 20, 820, 835, 60, 61, 191, and 834; 29 CFR Parts 1910 and 1926; 40 CFR Parts 61, 191, 192, and 300; 49 CFR Parts 173 and 175; as well as the Atomic Energy Act, CERCLA, the Clean Air Act, The Clean Water Act, The National Oil and Hazardous substances Pollution Contingency Plan, and RCRA.

Frank has a Masters Degree in Environmental Engineering and is a current Ph.D. candidate at UNM College of Nuclear Engineering.

Rick Schassburger
Rick Schassburger has a Master of Public Administration and a Bachelor of Science. Rick has over 19 years of various experiences. As Technical Team Lead in the Analysis, Assessment and Evaluation Division, Rick Responsible for the development and implementation of the assessment program of the Integrating Management Contractor (IMC), a $600 Million per year contract, at the Rocky Flats Environment Technology Site(RFETS). As a Physical Scientist in the Program Management Team at Rocky Flats Area Office, he served as team lead, including being a member of specialized teams consisting of the Reorganization Implementation Team, Rocky Flats Cleanup Agreement Negotiation Team, Environmental Restoration Tolling Agreement Negotiation Team, and the Environmental Restoration '95 Conference organization committee. Rick was responsible for managing the environmental restoration activities relative to planning, budgeting, implementation and regulator interface related to soil, surface water and ground water cleanup as well as building decontamination and decommissioning at Rocky Flats. Rick has acted as the Division Director and Major System Acquisition Project Manager for 1 ½years and has served as the National Environmental Policy Act (NEPA) Compliance Officer for RFETS. Prior to 1998, Rick held various management positions at the Rocky Flats Area Office. He was the Branch Chief of the Environmental Policy Branch and Acting Branch Chief, Safety and Environmental Evaluation Branch. Prior to 1988, Rick held various positions at the Chicago Operations Office.